

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

Vol. 69
No. 5

ESTABLISHED 1882 \$4.00 Per Year
Single Copy 15 Cents

LAW AND DEMOCRACY FIGHTING LAWLESSNESS AND AUTOCRACY

THE BUSINESS SITUATION AT THE END OF THE WAR.

[*Theodore H. Price in World's Work.*]

"This is a war of economic endurance. On the one side as aggressor is a group of three nations who control 18 per cent. of the world's trade and about the same proportion of its wealth and population.

"Against them there is actively arrayed another group who control 50 per cent. of the world's trade. To the flags of this opposing group one-half of the mundane population owe allegiance, and under these flags more than half of the wealth of the earth has hitherto found protection.

"The neutral portion of the world is, for the most part, linked by commercial self-interest or racial and political sympathy with the faction that dominates half the population, wealth and commerce of the planet.

"It is unthinkable that, with such a preponderance of men, wealth and commercial power on the side of law and democracy, the small minority of lawlessness and autocracy can triumph.

"It is equally self-evident that the success of the Allies means a great expansion in the world's trade.

"For one thing, European disarmament is almost certain to come with a peace that will seal the doom of militarism and release to productive industry the standing armies hitherto maintained.

"Relieved of the burden of taxation previously levied to support these military establishments, and assured of protection against lawlessness, the commercial enterprise of democracy will speedily develop the undeveloped portions of the world and create a large purchasing power where none exists at present. * * *

"In the Napoleonic and Crimean wars, Great Britain fought on behalf of civilization and law against tyranny and oppression. She is now engaged in a similar struggle. Is there any reason to doubt that a repetition of her triumph will produce the same commercial result, and can there be any question that the productive energies of the United States will be fully employed to meet the increased demand that will result from the extension of a beneficent civilization?"

BALTIMORE, FEBRUARY 3, 1916



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MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade Name Registered in the U. S. Patent Office

VOL. LXIX. No. 5. }
WEEKLY.

BALTIMORE, FEBRUARY 3, 1916.

{ \$4.00 A YEAR.
{ SINGLE COPIES, 15 CENTS.

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.

RICHARD H. EDMONDS, Pres. VICTOR H. POWER, Treas.
FRANK GOULD, Vice-Pres. I. S. FIELD, Sec'y.

RICHARD H. EDMONDS, Editor and General Manager

BRANCH OFFICES:
NEW YORK, 52 Broadway CHICAGO, 1409 Fisher Bldg.
BOSTON, 733 Old South Bldg. ST. LOUIS, 606 Century Building

Subscription \$4 a year (payable in advance) to United
States, Mexico, Cuba, Porto Rico, Hawaii and the
Philippines. To Foreign Countries (including Canada)
in the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as second-class matter.]

In order to avoid delays, all correspondence
pertaining to news or advertising matters should
be addressed directly to the Manufacturers
Record, Baltimore, Md., and not to individual
editors, officers, employees or any branch office.

BUILDING AUTOMOBILES IN SOUTH.

ROCK HILL, S. C., which is noted among other things for the success of buggy-making, is now branching out and undertaking the manufacture of automobiles by the same people who have made such a remarkable success of the Rock Hill Buggy Co. This company, which has for years been noted as one of the most substantial vehicle-making concerns in the South, is now, through a separate company but controlled by the same people, establishing an automobile factory under the name of the Anderson Motor Company.

We take it for granted that the people who have been responsible for the development of buggy-making at Rock Hill will not undertake to put on the market an automobile that is not satisfactory to the users and that is not worthy of the reputation which they have established in their buggy-making industry. On this account the MANUFACTURERS RECORD congratulates Rock Hill on the establishment of this industry and wishes for the new enterprise the very greatest success.

The South is annually spending many millions of dollars for automobiles. The amount, however great it may be now, will continuously increase, for the automobile and the motor truck industry is as yet in its infancy. The present drain on the South of millions sent North and West for automobiles should as soon as possible be stopped by the establishment of automobile plants in the South. Plants of this kind, however, cannot be successfully established unless backed by plenty of capital and the highest skill in workmanship and salesmanship. It would be worse than folly for the South to invest money in automobile factories merely on the sentimental theory that Southern people will buy Southern-made automobiles because they are home products. Southern people will not buy such products unless in price and quality they can favorably compare with the automobiles that can be purchased from other sections. To meet this condition a Southern automobile factory must be able, in the language of the day, "to deliver the goods," or else it better not undertake to go into the business. There is a vast field, so far as the market is concerned, for every year will show a great increase in the purchases of automobiles by Southern people. The question of this section keeping at home the millions spent for automobiles depends upon whether they can be produced to compete in quality and price with automobiles made elsewhere.

A number of automobiles have been made here and there in the South, not always with success. We trust the Rock Hill enterprise will set a pace and be abundantly successful to the profit of its stockholders, to the town in which it is located, and to the South at large.

PLACE THE RESPONSIBILITY WHERE IT BELONGS AND NOT ON THE SOUTH

ROGERS, BROWN & CO.,
Pig-Iron and Coke,
Ferro-Manganese, Fluorspar,
Buffalo, N. Y., January 19.

Editor Manufacturers Record:

I have read with interest your "Open Letter to the Iron and Steel Men of America," dated January 18, and to a certain extent cordially approve the argument and appreciate the points you make. Beyond that the argument would be good if the suggestion were feasible.

For more reasons than you mention it is unfortunate to have the iron and steel enterprises of this country dependent on an ore supply which is chiefly drawn from a small territory in Northern Minnesota and Northern Michigan, and it would be eminently wise if all further investments in blast furnaces and steel works could be made in other sections of the country and not subject to the inevitable shrinkage in values which they must face unless (which is improbable) other large deposits of iron ore are hereafter discovered contiguous to the Great Lakes.

But you can no more induce capital to go into the South or the Southwest at the present time to build blast furnaces and steel works than you can induce capital to go into merchant marine while our laws put a handicap on every vessel flying the American flag.

Blast furnaces and steel works must have a consuming market in their immediate vicinity. There is no prospect of such consuming establishments being built, and the population is not dense enough there to support them if they were built. Their product could not compete in the consuming fields and pay the cost of transportation thereto. This will all come in time, but the country must grow up to it in the South and Southwest, just as it must in the Rocky Mountain and Pacific coast States.

There has been one earnest effort to do what you suggest, and the Steel Corporation has poured millions of money into the Birmingham district in the effort, the only return upon which so far has been "knocks" from the public and persecution from politicians.

WM. A. ROGERS.

The MANUFACTURERS RECORD fully appreciates all of the points made by Mr. Rogers, whose long experience in the iron industry has given him a very broad knowledge of iron-making conditions and consumptive requirements in the country at large, and yet we cannot agree with him on some of the points made in his letter. Notwithstanding his view that capital cannot be induced to go into the building of a merchant marine, handicapped as all American vessels are at present, capital is going into the building of a merchant marine, and to a much larger extent than since the early days when America ranked as one of the great shipowning nations of the world.

Despite the handicaps of unwise laws, capital feels justified by conditions in the world's merchant marine in going very largely into this business at the present.

In the same way conditions in this country in connection with iron and steel are of such a character that capital is not only justified in going heavily into the development of the iron and steel industry of the South, but the capital now invested in the iron and steel interests of the nation cannot in any other way possibly protect itself by insurance against destruction should the Lake Superior region ever be captured by an enemy. There is an absolute necessity from the viewpoint of the nation's safety as well as the protection of invested capital that iron and steel makers now dependent upon Lake Superior ores should protect themselves and their investments by the development of similar interests in the South and Southwest.

We disagree entirely with Mr. Rogers in his statement that there is no prospect of the establishment in the South and Southwest of a consuming market for the output of blast furnaces and steel works because the population is not dense enough to justify it. On the contrary, population is steadily increas-

ing, and the very establishment of great iron and steel making interests would create the conditions which would bring about an influx of population and immediately increase the consumptive requirements for iron and steel.

The development of the South now under way would be tremendously increased if iron and steel men of the country and the nation's great capitalists would turn their energies to this field as actively as for years they have given their energies and their capital to the development of the region tributary to the Lakes. The conditions in the South at present justifying such work are certainly as promising as were those which in earlier days brought about the growth of the iron and steel industry in Pennsylvania and the Lake region. If capital interested in iron and steel is so timid that it dare not in the South take the risks which it took in the development of other iron sections, it will of necessity take a very much greater risk in leaving the whole iron and steel industry of the country unprotected in the event of war.

Mr. Rogers, in his closing sentence, says:

There has been one earnest effort to do what you suggest, and the Steel Corporation has poured millions of money into the Birmingham district in the effort, the only return upon which so far has been "knocks" from the public and persecution from politicians.

Again we think Mr. Rogers is in error.

The Steel Corporation has not yet poured into the Birmingham district the amount of money which its officials in the beginning stated would be necessary to invest there to bring about the best conditions for profit making, and yet, despite the long, hard depression which existed up to a few months ago, almost ever since the time the Steel Corporation invested in the Birmingham district, it has made some profit out of its investment and has created an industry worth vastly more than the total investment it has made there.

If the Steel Corporation were willing to sell the Tennessee Coal, Iron & Railroad Co., buyers could be found for it at a very large increase over the cost. The Steel Corporation has thus been getting an increment which has come from its investment in Alabama, notwithstanding the exceedingly adverse conditions of the last eight years. At the present time this investment is making very large earnings, fully justifying all the money that has been put into the property. There were not many iron properties in any part of the country that made much money for a year or two prior to the recent activity.

Moreover, the persecution from the politicians has not been from Southern politicians, as might be inferred from Mr. Rogers' letter. The fight against the Steel Corporation's purchase of the Tennessee Company was made by President Taft's administration. The suit against the company was inaugurated by his administration, which viciously denounced the purchase, and it was a Republican administration which fed the papers of the land with violent statements alleging that the Steel Corporation was trying to monopolize the iron and steel trade of the country through its purchase of the Tennessee Coal, Iron & Railroad Co.

Unfortunately, and unwisely, we think, a Democratic administration was afraid to drop the suit when the lower courts decided against the Government simply because of the fear that it would then

be charged that the Democrats were working in the interest of the Steel Corporation and failed to carry out a suit inaugurated by a Republican administration.

We believe that nothing but pure, or rather we should say impure, politics was responsible for the inauguration of the suit by the Republicans and for its continuation by the Democrats.

It is true that there has been some criticism or some "knocks" from the Birmingham public because the Steel Corporation has not carried out in that district as large developments as had been projected. Some of these developments were halted prior to the inauguration of the suit. When the Steel Corporation made its investment in Alabama some of its officials strongly encouraged local people to undertake a very broad scheme for the building of an industrial town of the highest order for the employees of the Corporation. Local people invested their money heavily in the plan, with the heartiest co-operation and endorsement of some of the officials of the Steel Corporation. No sooner had the enterprise been launched and the stock advanced over the subscription price than some of these officials sold their interests in the town enterprise and left the local people to hold the bag. This investment, in addition to having been made with the endorsement and co-operation of some officials of the Steel Corporation, was based on the plans made as to the extent of the development work that would be carried out in the vicinity of this industrial town.

Owing to the fact that these developments were halted and that some officials of the Steel Corporation had promptly sold their stock in the industrial town at an advance at the first moment possible, there was created a certain degree of friction or irritation on the part of the local men who in good faith had put their money into the building of one of the best-planned industrial towns ever established in this country. That they have said very little about the matter, although they had some justification for saying a good deal, has shown a strong reserve power on their part.

It is not surprising that on account of these facts as given by Birmingham people there have been some criticisms or some "knocks" of the Steel Corporation by those who have felt that it had not dealt with the local situation in the co-operative spirit which the Alabama people expected and which they believe they had a right to expect.

Nevertheless, it must be borne in mind that the denunciation by the politicians has not been by Southern politicians other than that of the Democratic administration which followed in the footsteps of President Taft's administration, which started a suit without, so far as we have ever been able to see, a single leg on which to stand, for every intelligent man in the country familiar with iron and steel knew that the Steel Corporation did not become a monopoly by reason of its purchase of the Tennessee Coal, Iron & Railroad Co., and knew that there was no likelihood of its becoming a monopoly, since independent interests were increasing their output more rapidly than the Steel Corporation was doing.

Had it not been for this most unwise suit, commenced by Republicans and continued by Democrats, we believe that the Steel Corporation would have carried out in the Birmingham district all that it projected at the start, that there would have been no reason for "knocks" or criticism on the part of local people, and that the prosperity created by these developments would have enormously stimulated industrial activities of the whole South and brought about a very great increase in the consumptive requirements of the South for iron and steel.

Under these circumstances we think Mr. Rogers, for whose judgment we generally have very great respect, has looked at the situation from the wrong point of view, and is, in effect, charging the South with "knocking" when the charge should have been placed against the Republican party, and his intimation of a lack of success of the Steel Corporation's investment in Alabama is contrary to the actual facts, and, therefore, his arguments are, as we see the matter, entirely without weight in the consideration of the broad development of the iron and steel interests of this section. Mr. Rogers should have charged the politicians of the North with inaugurating this fight against the Steel Corporation, whereas

the natural inference from his letter would be that Southern politicians are the ones responsible for it.

We are not disposed in the slightest to take from the shoulders of Southern politicians the burdens which they should bear for the injury they have done the South in continuing the fight against the Steel Corporation and, for their free-trade activities, but the blame must rest wholly upon a Republican administration for starting the suit. In this President Taft and his legal advisers made a sad and stupid blunder which has cost the South many millions of dollars, and President Wilson and his legal advisers didn't have the political courage to accept a unanimous court decision, but kept up the fight, and thus brought losses of still more millions upon the South. None of these facts, however, are important in considering the wisdom of putting big capital into Southern iron and steel making.

MILLIONS THAT WOULD BE SAVED BY WATER-POWER NITROGEN INDUSTRY.

THE people of this country would be quite as well off as they now are if they granted a subsidy or bonus of \$12,600,000 per annum for the establishment of the water-power nitrogen industry in the United States."

This is the striking statement reported to have been made by Mr. Henry J. Pierce of Seattle, Wash., in a talk recently given before the Commercial Club of Boise, Idaho. Mr. Pierce pointed out that during 1913 the United States imported about 625,000 tons of Chilean nitrate, valued at \$21,000,000. As there is a Chilean export duty of 60 per cent., the United States thus paid to the Chilean Government \$12,600,000, which Mr. Pierce declares may be considered merely a part of the amount which the people of the United States pay for its policy of water-power stagnation.

This is a very striking presentation of the case. The people of this country should become aroused to the situation. It has been repeatedly pointed out that Germany, cut off from importation of Chilean nitrates, has supplied all this deficiency by extracting nitrates from the air. Outside of a plant recently started up in South Carolina, the United States is deficient in the water-power nitrogen industry and is wholly unprepared for an emergency which would require a great quantity of nitrates in the manufacture of explosives.

It is a well-known fact that ample capital was available for the development of water-power for the manufacture of nitrates on the Coosa River in Alabama, and that the enterprise was stifled through the refusal of the United States Government to permit the construction of the necessary dam in the Coosa River. As a consequence the millions of money which would have gone into this enterprise were invested in a cyanamid plant in Canada.

Whenever the Government will permit private capital to develop this great essential in completing national preparedness companies with large capital and ample experience will build such plants in the South, and from the interest manifested in the Northwest it is evident that groups of capitalists in that section are prepared to utilize the great water-powers of the Northwest for similar purposes.

The necessities of the hour, as well as the saving to this country in all times, certainly justify serious consideration of this matter by the members of the Congress.

CHANGES IN THE SEAMEN'S ACT PROPOSED BY AN ABLE COMMITTEE.

THE suspension of certain provisions of the seamen's act is recommended by a special committee of the Chamber of Commerce of the United States, consisting of R. G. Rhett, chairman, formerly the Mayor of Charleston, S. C., now president of the people's National Bank, Charleston; Frank A. Seibeling, president of the Goodyear Rubber Co., Akron, O.; Homer L. Ferguson, president of the Newport News Drydock & Shipbuilding Co.; Russell H. Loines, a marine insurance expert of New York, and J. Howland Garner, vice-president of the New England Steamship Co.

All of the commercial bodies of this country and

the American chambers of commerce abroad, in Paris, Berlin and Constantinople, and in China and Brazil, are being asked for a referendum vote on the advisability of revising the seamen's act. The committee points out that the repeal of the measure as a whole is not desired, for the soundness of many provisions is recognized, along with the good purposes behind other provisions, which the legislation as drawn fails to make effective.

The committee recommends that Congress be asked to suspend at once sections four, thirteen and fourteen. Section four has to do with the demand of half-pay at American ports by seamen on foreign ships. Section thirteen deals with the language test and the complement of able seamen, while section fourteen refers to life-saving appliances and the manning of lifeboats. It is held that these provisions discriminate against American ports and American ships and are restrictive of American commerce, and that they should be suspended until such time as by international agreement the requirements of these sections can become equally applicable to the shipping of all nations.

The committee also recommends that the sections of the act dealing with deserters should be repealed as to foreign vessels, and that the State Department should seek to have arrest and imprisonment of seamen for desertion by other nations abolished.

The committee recommends that Congress should be asked to request the President to withdraw at once the notices the United States has given regarding abrogation of treaties; also that a Federal Shipping Board should be created.

Regarding the Federal Shipping Board, it is recommended that this board take over the staff and duties of the Bureau of Navigation and the Bureau of Steamboat Inspection, the two departmental bureaus which now administer the laws regarding the American merchant marine, and to proceed at once to revise existing laws, and to propose amendments which provide comprehensively and adequately for the comfort, safety and welfare of the crews, manning and all other matters related to our merchant marine, and especially the design and construction of vessels with regard to safety.

Apart from certain discriminations mentioned in the report, the committee is of the opinion that the most serious discrimination contained in this act against American shipping and commerce lies in the fact that its most important provisions have been made applicable first to American shipping, and will be made applicable later, if at all, to foreign shipping.

The committee points out that merchant vessels were never more in demand to carry the products of our manufacturers than they are today, and rates for ocean transportation are higher than ever before. Conditions such as these would by themselves result in immediate investment of large amounts of American capital in the construction of new merchant vessels and putting them upon the ocean at the earliest possible moment, and our national advantage and national welfare imperatively require this enlargement of the American merchant marine.

DEATH OF JOHN A. HILL.

REPORTS of the sudden death of John Alexander Hill, president of the Hill Publishing Co., came as a great shock to the wide circle of his friends in the newspaper and business world. But fifty-seven years of age, and devoted, with his customary vigorous energy, to the details of his large business affairs up to the day of his death, even his intimate associates were unprepared for the fatal stroke which carried him off Monday morning of last week while on his way from his residence in East Orange, N. J., to his New York place of business.

According to the preliminary statement of the U. S. census for St. Louis for 1914, that city shows a substantial industrial growth over 1900. The amount of capital invested in manufacturing enterprises in that city for 1914 was \$315,950,000, a gain of \$46,558,000, or 17.3 per cent., over the \$269,392,000 of manufacturing capital in 1900. The output was valued at \$359,797,000 in 1914 and \$328,495,000 in 1900, the increase being \$31,302,000, or 9.5 per cent. for that period.

THE ORIGIN AND MOTIVE OF THE PEACE PETITION BY THE SO-CALLED "ORGANIZATION OF AMERICAN WOMEN FOR STRICT NEUTRALITY."

ON last Thursday Senator Kenyon presented in the Senate a petition from the "Organization of American Women for Strict Neutrality." In doing this he said:

The petition is signed by over a million people, reaching into every State in this Union, and if joined together in its various parts it would reach some 15½ miles. There is no desire on the part of these women to irritate in any way the present conditions, to do any unpatriotic act or to in any way do anything sensational. The signers of this petition from every State in the Union are not pro-British or pro-German; they are pro-American, pro-humanity and pro-Christianity; they are actuated only by the highest humanitarian motives.

In making these statements Senator Kenyon gave an illustration of the density of ignorance which at times prevails in the Senate by men who are supposed to know whereof they are talking. If he had wanted to get at the facts and to give to the Senate and to the country a fair statement, Senator Kenyon could have said:

"The 'Organization of American Women for Strict Neutrality' has as its president a rich Baltimore German woman who for years has been an intense hater of Great Britain. This organization has its headquarters in her home. It has utilized every possible means through an appeal to ministers, Sunday-school scholars and others to secure signatures to its petition without regard to whether the signers had any knowledge whatever of that which they were signing. This petition was presented to immature girls and boys with a statement that this was wholly in the interest of peace, and they were asked to sign it on the ground that in doing so they would help to bring about peace. A lot of youths, male and female, who knew no more about international law or international morals than the Devil does about Paradise put their names to the petition, and it goes before the country as though it was an intelligent expression of the desire of a million American people. Considering the tremendous effort made to secure signatures from anybody and everybody, regardless of age or of their ability to understand important international questions, and in view of the number of Germans throughout the country, it is a reflection upon the work of the organization that it did not get many times the million signatures it claims.

"The moving spirit of this organization, the motive of its existence, is not Peace, except that peace which could come only by the overwhelming victory of Germany against the Allies. The peace desired by those who organized this scheme is the peace which would come when a well-armed robber enters an unprotected house, the inhabitants of which are finally killed, and, therefore, the robber has peace because his enemies have all been murdered. That is the peace which is desired by this organization. There are doubtless thousands of innocent people who do not understand the motives of the organization whose names appear on this petition, but who do not desire such peace. People of immature minds and some of immature international morals signed the petition without knowledge of the motive back of it, and who did not know that they were being 'worked' specifically and directly in the interest of Germany and by an organization the head of which is a German woman of intense love of Germany and intense hatred of Great Britain.

"In securing signatures to this petition another proof was given of the fact that about one-half of the world will sign any petition presented without stopping to read it. The story goes, and is doubtless true, that a few weeks ago an official of a Western town, in order to demonstrate the truth of this statement, drew up a petition addressed to the British Government asking it to shorten the distance to Tipperary, and in a very brief time 400 signatures were secured from people who hadn't the slightest idea of what they were signing.

"The 'Organization of American Women for Strict Neutrality' has been vigorously and aggressively working for many months to secure signatures to its petition, and it has, as stated, appealed to ministers,

Sunday-school scholars and others to take these petitions around and have them signed on the plea that these signatures would help to bring about peace. If this organization had openly announced that it was organized in the interest of Germany, that its campaign was directed by Germans and pro-Germans, and financed by them, and that the peace which it desired was the peace which would come only through German victory, the public could at least have given it credit for an open and fair fight, and that it at least had the merit of letting people know where it stands."

If Senator Kenyon had desired to make a fair statement to the Senate about this petition and the organization back of it, he might have presented the foregoing facts, and then no one would have been deceived by his wordy and worthless effort to make an impression by claiming that if all of the various papers on which these signatures appeared were joined together, they would reach some 15½ miles in length. Suppose blank sheets or sheets of paper containing only one signature joined together stretched out 50 or 100 miles, what has that to do with the weight or value of any petition. In his effort to be impressive in making this statement Senator Kenyon simply indicated how incomprehensibly small are some of the brains found in the United States Senate. Indeed, one may be justified in saying that occasionally there are to be found in the Senate so-called brains which would rattle inside of a mustard seed.

We take it that Senator Kenyon was either densely ignorant of the origin and the work of the "Organization of American Women for Strict Neutrality," and that, therefore, he entirely failed to present true facts to the Senate; that he was as badly "worked" and played for a sucker just as many whose names appeared on these petitions, or else that he, too, desired to deceive the public as to the origin and motive of the organization back of this petition.

SOUTH NOT OPPORTUNIST.

THE front page of the MANUFACTURERS RECORD for this week is adorned with an appeal to the South to get upon the Protection Bandwagon.

The business men, the manufacturers, the producers, are called on with a loud voice to see to it that the traditional policy for which the South has contended be thrown into the discard.

The Southern politicians are warned that if "they keep on playing with their worn-out theories of free trade, they will have no one but themselves to blame for their inevitable overwhelming defeat":

The many people of the South who are protectionists at heart owe it to themselves and to the welfare of their country to meet the issue squarely and no longer be held in bondage by the politicians.

Intellectual slavery is worse than physical slavery.

This is no more nor less than rank political opportunism. The country in the last election declared that it was opposed to the high protection that must inevitably operate to put the burden of government on the shoulders of the earners of wages to the exemption of the controllers of wealth. Four years before the country believed Mr. Taft when he promised the revision to remedy that condition, and it repudiated him when he permitted the repudiation of the promise.

The European war has denied a fair test of Democratic tariff legislation. Democratic laws of a constructive character have, however, saved the nation from panic and brought it to prosperity. The MANUFACTURERS RECORD deludes itself if it thinks that the South is so inconstant as to desert the principles for which it has fought for the sake of changing a moral victory into a venal sack.

As for "politicians," Southern or otherwise, it is as ever up to them to gamble their opinions on what the people on whom they rely are thinking. The profession in the South is too old at the game to be stampeded into breaking a high pair for the chance of connecting with a far more problematical flush.—Raleigh (N. C.) Times.

We are as densely ignorant of what our friend of the Times is trying to say in the last paragraph, as he is in interpreting the thought of the business South.

This country did not repudiate protection by Mr. Wilson's election. He is a minority President, and but for the Kilkenny cat fight in the Republican party the Democrats would have been badly defeated.

Unless the Republicans again indulge in suicide, no free-trade party can win.

The European war has saved the country from disastrous depression and appalling financial losses which would have come from the Underwood-Simmons bill.

PRESIDENT WILSON'S APPEAL TO THE NATION.

THE appeal of President Wilson to the country in his speechmaking trip in the interest of "Preparedness" will indicate to those who have given little heed to this vital question how important it is, and why the MANUFACTURERS RECORD has for months devoted so much space to the subject.

During the last four or five months the MANUFACTURERS RECORD has fully realized that this is the most vital question before the American people. It has seen that immediate preparedness may possibly be essential to national existence. It has recognized that no other problem of any kind before this country is of such overwhelming importance, and, therefore, week after week, it has unceasingly set forth these facts.

Some months ago we received on the same day from President Wilson and former President Roosevelt hearty letters of commendation of the facts we had presented.

That President Wilson now feels this position so keenly that he realizes that his duty to the nation demands such a campaign as he is now making, that he may be enabled to appeal directly to the public, shows that the earnestness and persistence with which we have pushed this work has been founded on the real needs of the hour and not on imaginary conditions.

The people of this country, those in office and those out of office, who have any means of reaching the public would be recreant to their responsibility to their families and to the nation and to the Democracy of the world if they did not, without ceasing, proclaim aloud the necessity of "National Insuredness" by "National Preparedness," and the former is possible only through the latter.

President Wilson is doing an unusual, but a wise thing.

MORE BY-PRODUCT COKE OVENS FOR THE BIRMINGHAM DISTRICT.

A GRATIFYING indication of the return of prosperity to the Birmingham district, and the intention of those responsible for the development of its iron and steel interests to pursue this development along the broadest lines, is contained in a communication to the MANUFACTURERS RECORD from Mr. James Bowron, president of the Gulf States Steel Co., printed below:

The Gulf States Steel Co. has this day signed a contract with the H. Koppers Company of Pittsburgh, Pa., for the construction of a plant of 37 by-product coke ovens of a capacity sufficient to provide the company's requirements for blast-furnace coke. This plant will be constructed at the Alabama City works, Gadsden, contiguous to the blast furnace. The coke produced will be used there and the surplus gas utilized in the steel works. The coal will be supplied chiefly from Virginia mines and partly from Altoona. Construction will commence immediately, and it is aimed to have the entire plant in operation by January 1, 1917.

THE SOUTHWARD TREND OF INDUSTRY AND MONEY.

HERE are many signs in evidence that leading capitalists of the East are beginning at last to adequately appreciate the opportunities to be found in the South, as nowhere else, for important industrial developments.

Within the last twelve months there has been created at Hopewell, Va., an industry which has brought into existence a town of 30,000 or more people. Into this enterprise has been put many millions of dollars, and while the Du Ponts will give little or no information as to the number of men employed, or the capital invested, the records of the nearby banks show that about \$1,000,000 is paid out every two weeks for wages. This alone indicates something of the magnitude of this enterprise.

At Kingsport, Tenn., there is being built a great dye plant capitalized at \$15,000,000, which the financial interests backing it in a printed statement claim will make one-half as much dyes as we have heretofore imported from Germany. It seems difficult to accept this statement, in view of the immense capital in the German dye industry. Nevertheless that a

plant of very great magnitude is now under construction is known to all, and that it and kindred interests are building up at Kingsport a thriving town promising to become one of the important industrial centers of the South is generally understood. Some interesting facts in connection with these enterprises, which include a big pulp mill, were given in a recent issue of the MANUFACTURERS RECORD.

This dye plant and other interests connected with developments in that vicinity are indicative of what can be accomplished in the South by well-considered and intelligently worked-out plans such as those that have been in operation by the Clinchfield people in the investigation of the resources along their line and in the intelligent presentation of the facts discovered to manufacturers and capitalists and the direct personal efforts to enlist their interest. The story as to how this big dye plant was located by the Clinchfield people ought to be studied by every man in the South who would know how to achieve big things in Southern development.

In another part of Eastern Tennessee there is now under way probably the largest single enterprise ever undertaken in the South outside of the Steel Corporation's work in Alabama. This is the project of the Aluminum Company of America, which is controlled by some of the foremost capitalists of Pittsburgh, looking to the development of an aggregate of about 400,000 hydro-electric power and the building in connection therewith of one dam about 185 feet high and the establishment of a great aluminum plant to use this power. It has been reported that the aggregate of these investments by the Aluminum Company, when the whole development has been rounded out, will be \$20,000,000 to \$25,000,000 or more.

Over in North Carolina the same company has purchased, as recently reported, the interests of the French Syndicate which prior to the war was preparing to spend \$10,000,000 at Badin in the development of hydro-electric power and the manufacture of aluminum. The operations of the Aluminum Company at this point will be on a larger scale even than that projected by French capitalists.

In and around Baltimore many big enterprises are being built by Eastern capital and some heavy extensions are being made at existing plants, all representing an actual outlay of at least \$10,000,000.

These great enterprises mentioned, representing many millions of dollars, are indicative of the growing recognition among men of wealth of the unequalled advantages for industries possessed by the South. For some years this section has made much less progress than it ought to have made, but conditions were altogether against it. At that time we were passing through a period in which capital was timid and large construction work was rare. We have now entered a period when capital is daring, is abundant and is eagerly seeking great opportunities.

In the whole history of Southern development there has been no better time than the present for broad work on the part of Southern business men, Southern papers, Southern railroads and Southern public service corporations and all others interested in the upbuilding of this section. Never before could these interests to better advantage enter vigorously upon a campaign designed to focus upon the South the attention of the business and financial leaders of the entire country. At this time capitalists and manufacturers are ready to listen to arguments. They are ready to hear intelligent presentations of the South. They are recognizing that without the largest development of the South there can be no real "National Preparedness" for business or for peace. And so, from the selfish standpoint of money-making and the broader standpoint of national advancement and safety, they are thinking about the South, and their thinking can be concentrated upon the opportunities of this section and made to produce tangible results on a larger scale than we have ever had if the whole South will unite in the right kind of campaign.

In this work we need to make business the politics of the South and not to make politics the business of the South, as we have so often done in the past.

Let us make the supreme question of the hour in Southern development the utilization of the vast wealth-creating possibilities of this section.

NATIONAL AID IN ROAD BUILDING AND THE REASONS THEREFOR.

IT is fortunate that when there was an active propaganda some years ago to induce the National Government to build good roads throughout the country the effort was defeated, for if the work had been undertaken at that time by the National Government, local initiative would have been killed and the people at large would not have appreciated the importance of good roads nor have understood all the questions connected with their building to such an extent as they now do.

The fight made during the last ten years throughout the country to awaken all people—farmers and business men, preachers and teachers and the women and children—to the supreme importance of good roads as one of the great factors in civilization has been productive of enormous good. People have come to realize that without good roads there cannot be, under modern conditions, much progress in education, in ethics or in business. The impassable road, whether it be of mud or of sand, is a hindrance to education, to religion and to material upbuilding.

In olden days, before the full development of city life and the many attractions that living in a city now presents, the people in the country had advantages in the matter of roads about equal to those of city dwellers. With the growth of cities, however, there came better paved streets and more of the modern conveniences of living. To these factors were added the tremendous demand of industrial activities for the employment of people, and the two created a great drain on country life. People crowded from the country to the city. The opportunities for employment were partly responsible for this, but the comforts and conveniences of city life, with well-paved streets and the freedom from the mud roads, which hampered country life, were compelling factors.

The road agitation of the last ten years brought these facts more and more clearly to public attention, and now every man of intelligence, it matters not what may be his business or his profession, recognizes that the highest development of a country cannot be attained without good, modern roads. This is a great achievement. It could never have been brought about to the same extent as at present if the National Government had been doing the work of building good roads. The people of the country have been educated as to the value of good roads by the very struggle to secure them.

The situation, however, has now changed. The country at large recognizes the value of good roads, and the people everywhere are willing to bear the burden to the extent of their ability to secure them.

Just when this has been attained the National Government begins to find that the development of its parcel-post business means that good roads are essential, or else the parcel-post system will to a large extent be a failure. Unless the parcel post can be made to reach its highest mark of usefulness by providing facilities for shipment to the way-back country places, it will to a large extent be a mistake. If the parcel post is to be a success financially, and from the point of view of the welfare of the people of the country, it must be able to deliver goods at the lowest possible cost without loss to the Government. If handicapped by bad roads, it will to a large extent be a failure, for it cannot deliver goods over bad roads except at an exorbitant cost, much beyond the price charged.

This parcel post, therefore, makes it incumbent upon the National Government to co-operate in some way in the building or the maintenance of good roads for its own business. Added to this situation, we now face the question of "National Preparedness," and the more this is studied the more it will be seen that good roads are an essential part in any scheme for protecting the nation from invasion. Without good roads motor trucks and automobiles for the transportation of troops and munitions of war would be almost worthless, and motor trucks and automobiles have now become as essential in war as in peace. We must, therefore, develop, and very largely with "National Preparedness" in view, a comprehensive road system which will unite all the strategic points in the country so that troops and munitions can be moved rapidly from one point to

another to better advantage than by railroads, or certainly in combination with them. These roads must be so well built that the heaviest cannon can be carried over them without difficulty. Comparatively few roads in the country would stand such a strain at present, and it is not to be expected that counties and States, building roads merely for the commercial traffic of the day, should have to take into consideration the possibilities of the use of these roads in time of war. The National Government alone can take cognizance of that feature. It, therefore, becomes important that the National Government should become interested in the building and maintenance of roads from the standpoint of preparedness even more than from that of the parcel-post business.

These two factors have completely changed the situation. They are revolutionizing in their effect and in their importance. It is wise, therefore, that the National Government should give consideration to the development of a system of co-operation with States by which the two can work together in the building of a great system of roads adequate, as to width, character of construction and permanency and solidity of bridges, to meet all the conditions that would be involved in the possibility of their use for purposes of war.

There are some features connected with this which will be difficult to work out. In a bill now before Congress it is proposed to make the degree of co-operation between the States and the Government dependent to a considerable extent upon the population. However difficult it may be to work out some better system. Under this plan it should be done, for instance, based on its population, Alabama would receive \$255,000 a year, while Massachusetts would receive \$401,000. And yet Massachusetts is only about one-sixth the size of Alabama, and by virtue of its small area and dense population is in an infinitely better shape to build and maintain its roads than in a sparsely-settled State like Alabama.

Georgia, on the basis of population, would receive \$311,000 a year, while Maryland, about one-seventh as large, would receive one-half as much. Similar conditions would prevail as to all other States. On this basis it would be only another illustration of giving largely to States which already have an abundance, while the larger and more thinly-populated States of the South and West would receive very small amounts as compared with the relatively big sums contributed to the building of roads in the rich and populous States of the East, which are already abundantly able to build and maintain good roads.

In this effort to unite the States and the Government in road building some system that is not sectional in its workings should be devised, which, while doing full justice to the densely-populated States of the East, already enormously wealthy and already to a large extent having good roads, should give a larger measure of help to the States which need it the most. It is not economically wise nor sound to base this distribution of Government aid to road building on population.

An attempt has been made in this bill to meet this condition by arranging that a part of the proposed Government expenditures should be based on rural free delivery and star routes in addition to the amount based on population. In this way, in the final distribution, Alabama would receive \$579,000 and Massachusetts \$536,000. This would, in part, offset the point raised, but it does not fully meet the conditions. Massachusetts, with nearly 3,500,000 people and with only 800 square miles of area, would, under this arrangement, receive nearly as much as Alabama, with 2,100,000 population scattered over 51,000 square miles and needing good roads to a far greater extent than Massachusetts and far less able to build them than is Massachusetts.

There are some inequalities in this way which it is very difficult to meet. The MANUFACTURERS RECORD fully appreciates them, but it believes that a wise distribution of the proposed expenditure by the Government should be made, having in view national co-operation in the largest way possible in furtherance of good road building by States where good roads are most needed for educational and material advancement and where there is the smallest relative financial ability to provide them.

Enormous Cash Accumulations of Steel Companies and Others

BUSINESS ON A CASH BASIS, BRINGING ABOUT UNPRECEDENTED CONDITIONS—POSSIBILITIES OF PLANT EXTENSIONS

[Special Correspondence Manufacturers Record.]

New York, February 1.

Announcement that the United States Steel Corporation had cash in bank as of December 31 last amounting to \$105,000,000 caused comment in the financial district. A note of criticism was heard at first because the point was made that a part of such enormous cash reserves might profitably have been employed in making improvements long since projected.

This argument was discounted, however, by investigations showing that, relatively considered, many other steel companies are also accumulating great reserves of cash. The treasuries of busy steel plants just now enjoying prosperity are overflowing with cash.

The public, which is buying steel as fast as it can be turned out at prices well above the highest figures heretofore recorded, is paying spot cash for its purchases. It has the money in the bank, and is making payments upon delivery.

Such a condition has not existed for some time heretofore, and one of the results of this new policy on the part of steel consumers has been an accumulation of cash balances on the part of steel companies that look large beyond proportion. Comparison with other years bears this out in part, and the question naturally arises as to why the United States Steel Corporation and other steel makers with enlarged bank balances do not enter at once upon an extensive improvement program.

At the corresponding period in 1906 the Steel Corporation's bank balance was \$67,636,845. That stood as

the high record until the recent announcement of the figures at the end of 1915.

The lowest December 31 bank balance ever reported by the Steel Corporation was that of \$43,499,121, in 1911.

Inasmuch as the Steel Corporation needs at all times as working capital cash ranging from \$40,000,000 to \$60,000,000, it is apparent that not until the beginning of this year has it ever had such an unwieldy amount of cash in bank. Liquid funds of an organization as large as U. S. Steel, doing such a vast amount of business in all parts of the world, and for and with so many classes of material, raw and finished, must at all times be large.

Disbursements are necessarily large. Purchases of materials and payments for new construction requiring millions of cash may frequently fall near together.

In addition to these payments, it now requires about \$12,000,000 cash every three months for the payment of dividends on the preferred and common stock, and some of the interest payments on bonds are made monthly. It is not infrequently the case that cash payments of the Steel Corporation for all purposes will average \$1,000,000 a day for a month at a time.

While nothing official is forthcoming as to the scale upon which the Corporation will base its improvement and extensive plans for the calendar year, it will most likely be an extensive one. If pending litigation does not act as a check, its purpose of adding to the capacity of its plants in the South may be put forward in a definite program.

"HOLLAND" ON LOCATION OF MUNITIONS PLANTS SOUTH.

Position of Colonel Roosevelt, Ex-Secretary Herbert and the Manufacturers Record on This Measure for Preparedness.

New York, January 26.

Possibly the few words which were spoken by Colonel Roosevelt to the vast body of hearers whom he addressed in Philadelphia a few nights ago which have occasioned the chief comment in this city were those in which he referred to the necessity, from the point of view of preparedness, for stimulating and encouraging a wise and thorough expansion of the great iron manufacturing plants in that part of the South of which Birmingham is the center.

The occasion was the first of which Colonel Roosevelt has taken advantage to justify in plainly spoken words the co-operation which was established when the United States Steel Corporation purchased the controlling interest in the great plants at Birmingham and its vicinity.

When Colonel Roosevelt, as President, gave a sort of qualified consent to this purchase, those to whom that assent was informally given were persuaded that he was of the opinion that this combination would be justified because it was reasonable and would prove in no way to be an unjust restraint of trade.

At that time Colonel Roosevelt was always considering the question of preparation, although in a general way. He had not had the experience based upon the European war on which to formulate well-perfected judgment. Therefore, those who then saw President Roosevelt and who, after he became a private citizen, talked with him, were persuaded that he looked at the proposition from a business, industrial and economic point of view. They have held that opinion ever since.

In his Philadelphia address—while alluding to the economic advantage of this combination—he also spoke of its value to the United States as a factor of preparedness. This confirms the view which has been agitated for some time by Richard H. Edmonds in the MANUFACTURERS RECORD of Baltimore. Colonel Roosevelt's statement commanded instant attention in this

city, and has been generally commented upon, some thinking it perhaps the chief feature of the Philadelphia address.

In line with the view that there should be interior industries which would facilitate the work of preparation, as well as increase the industrial activity in the South, there comes an authoritative report that in northeast Texas an iron and steel manufacturing plant is speedily to be established. There is what is thought to be a sound economic policy behind this organization. For it is possible to establish there a plant which can take advantage of the enormous iron-ore deposits in that vicinity and which will be able to secure coke at a very low price.

When this enterprise is in full operation it will identify one of the rapid changes now in progress in Texas, which makes it certain that the time is not distant when this empire of the Southwest will be, relatively speaking, as great an industrial community as it now is agricultural.

A communication recently made (to the MANUFACTURERS RECORD) by Hilary A. Herbert, who, after long service as Representative in Congress from Alabama, became Secretary of the Navy in the second administration of President Cleveland, is in entire accord with public opinion in the East, and especially in New York, upon the subject of preparedness. Mr. Herbert was commonly regarded as a worthy successor—although after the lapse of a Republican administration—of William C. Whitney, who, as Secretary of the Navy in President Cleveland's first administration, achieved so greatly in modernizing and building up the American navy.

Former Secretary Herbert, in his communication, advocates precisely the same policy of preparation which so many now in public life and which, especially, Colonel Roosevelt so cordially advocated. One of the most significant statements is this: "It was undoubtedly the unpreparedness of the Allies that caused Germany and Austria to make war against nations which had already twice their fighting strength, but in the face of all this evidence our pacifist of today thinks that it was the competition in preparedness that bred this terrible war. He insists that the way to prevent war is for a nation not to prepare for war at all, but

to be good and set an example, like an individual, of fair dealing and of justice to all."

With this as an introduction, and assured of public opinion, one of the great Secretaries of the Navy, a Democrat of the South, goes on to show what the necessity for preparedness is and that one of the factors in this work is the establishment in proper locations of adequate munitions plants.

HOLLAND.

Two Maryland Hotels to Cost Around \$800,000.

Plans are rapidly developing for the erection of two large hotels in Maryland, one of which will be located in Baltimore and the other on the site of the old Blue Mountain House, in Western Maryland. The Baltimore hotel, mention of which with preliminary sketch of building has appeared in the MANUFACTURERS RECORD, will be erected by the Southern Hotel Co., which has been incorporated with an authorized capital stock of \$1,000,000. Its officers include Dr. Merville H. Carter, president; Henry H. Head, vice-president, and A. J. Fink, treasurer. The structure will be erected at Light and German streets, and will be fireproof throughout, the dimensions being 148x93 feet, 10 stories, basement and sub-basement. The frame will be of steel, with curtain walls, promenade tile roof, and the building will be equipped with steam heat, electric light and power plant, electric elevator, etc. There will be eight bedroom floors, each containing 31 rooms, and in all there will be 250 rooms of various sizes, single and ensuite. There will be 19 private bathrooms on each floor, all the rooms to have running water, telephone and other conveniences. Marble and hardwood trimmings will be used in the principal lobbies, halls, dining room, banquet hall and reception rooms. The cost of the building will be about \$500,000. Plans are being prepared by Otto G. Simonson of Baltimore, and contract will be awarded about April 1.

The Blue Mountain Hotel will be erected by the Blue Mountain Hotel Co., incorporated with a capital stock of \$300,000. Officers of this company include Joseph Castleberg, president; C. F. Stewart, vice-president, and Ernest Roberts, secretary-treasurer, all of Baltimore. The company purchased the site of the old Blue Mountain House, which was destroyed several years ago, with 53 acres of land, and plans to erect a four-story building to contain 250 rooms with 100 private bathrooms. It will be constructed of natural stone and equipped with electric-lighting system, electric elevators, etc. A number of buildings still remaining on the property will be repaired. These include a chapel, bowling and billiard room and garage. In connection with the hotel it is proposed to construct a swimming-pool 50x50 feet, lined with white tile. Mechanical heaters and filters will be installed.

According to present plans, a portion of the hotel will remain open all the year, the entire hotel to be open only during the summer. Architect has not been selected, nor have details been fully determined, but it is estimated that the structure will cost about \$250,000. John J. Gibbons of Baltimore, who was manager of the former hotel, will be manager of the new one.

\$3,000,000 Metal Crosstie Company.

Permanent organization has been effected by the Maryland Metal Cross Tie Co., Havre de Grace, recently incorporated with \$3,000,000 capital. The offices are at Baltimore, and the officers are as follows: President, A. Freeborn Brown, Havre de Grace; vice-president, Stevenson A. Williams, president of Harford Bank, Belair; secretary, Clarence C. Foreman, Govans; treasurer, William J. S. Millar, Baltimore; directors, the officers named and James H. Harlow, Darlington, chief engineer of Susquehanna Power Co.; Frederick W. Steiner of Havre de Grace and George L. Townsend, Jr., of Wilmington, Del.

This company will manufacture the Gorrell patented metal crosstie, and its plant will include a steel foundry with electric power, the annual capacity to be 500,000 ties. Plans include a 400x200-foot concrete, steel and glass building. Patents cover the tie made in cast steel or malleable iron, rolled or pressed steel, as well as the novel locking of a railroad spike device (which is an ordinary railroad spike driven into a hole in metal, which has sinuous sides) and the insulation of the rail and tie where electrical signals are employed.

Captains of Industry Confer on Means to Gain and Hold Foreign Trade

NATIONAL LEADERS POINT OUT NECESSITY FOR INDIVIDUAL ENTERPRISE AND INITIATIVE, TOGETHER WITH CO-OPERATION ON THE NATIONAL GOVERNMENT'S PART.

[Special Dispatch to Manufacturers Record.]

New Orleans, La., February 1.

A new and significant chord in American business discussion and promotion was sounded, clearly and harmoniously, in the three days of the third National Foreign Trade Convention, held in New Orleans January 27, 28 and 29. The dullest ears could not miss it. The most sympathetic mind could not fail to comprehend.

These four-hundred-and-ninety-odd American business men were representative of the greatest creative industries, the most extensive transportation interests, the most typically successful commercial enterprises in the United States. As a group, they seemed instinct with a determination, not to be denied, that American capacity for organized effort, American genius and skill and ability to take infinite pains should be mobilized, to the end that for Americans should be realized the new fields of world-opportunity in foreign trade opened by the European war and the new world-conditions to follow the war's close.

And the chord sounded was this:

An unassuming, an unpretentious, a non-boasting, at times a very humble and fault-finding patriotism, which held in view the broadened and dependable prosperity of the American people and the extended and sustained prestige of America's business good repute as of far more importance than the profits to be gained by any man or any corporation.

Much of this sounded in the set speeches delivered by those who had been requested to bring what message they could on various selected topics. That, one might say, came from the natural desire of the speakers to make their appeal or deliver their lesson on the broadest ground. But the private discussion, the informal debate, in hotel corridors, on the expeditions about New Orleans, at the social functions, sustained the note.

Fewer than 25 men came, by invitation, to tell what they knew. The others came to learn, eagerly, earnestly, determinedly—each one, of course, with some story of his own experience and observation ready to be put at the disposal of his associates. And the 25 and more who came to teach were as one in saying that they were just as anxious to learn as were the others.

Yet these men probably possess among them more exact and detailed information—

**As to the state of international trade,
Of American trade abroad and the
ways and means to extend it,**

**Than any other group of like numbers
possible to be assembled.
In the United States.**

The message was delivered to the whole nation. Whatever message this conference was able to carry to the individual who attended it will reach, in more or less complete form, practically every organ of publicity in the United States that is of any moment—certainly it will be put at the disposal of the vast majority of the opinion-forming individuals in the United States.

Advance copies of the speeches and statements of the purpose of the conference were distributed in advance under the auspices of the Foreign Trade Council, to over 28,000 publications, including 3000 dailies and 7000 trade and technical publications. The others were the magazines, the weeklies, the agricultural press, Latin-American, European, Australasian and African publications were included in the list.

The Associated Press, the United Press, the International News Service and other agencies, as well as a corps of special correspondents, summarized and interpreted the daily proceedings at elaborate length.

Local newspapers threw their columns wide to an

extent seldom equaled even in liberal-minded New Orleans.

The conference may be said to be the influence that will crystallize into settled judgment and definite action what has hitherto been the unsettled beliefs, opinions and doubts of the better-informed business men of the United States.

An American merchant marine was declared to be an essential.

As Secretary Robert Patchin of the Foreign Trade Council phrased it: "Big business, lesser business, smaller business—and the United States Government—were shown by the public and also the unofficial utterances to be as one upon the general conditions to be faced when the war is ended, and as to the urgent necessity for the development of a national foreign trade policy speedily to be developed. Differences were only as to method, and that chiefly as to detail."

These conclusions represent practically the unanimous judgment of the conference:

First—That an American-owned, American-flagged merchant marine is an absolute pre-essential to any reliably-established, dependably-growing, firmly-fixed foreign trade.

Second—That a steady volume of foreign trade as well as a steady course of domestic prosperity depends upon the participation of an increasing number of smaller manufacturing interests and a widened variety of products sold at home and abroad.

Third—That co-operation among exporters is essential if they are to meet the Government-directed and Government-aided export combinations of foreign countries; this applying in the fuller measure not only to such great industries as steel and oil, but even to clothing, implements and the whole range of men or manufactured products. Specific legal authority for this should be drafted.

Fourth—A tariff, flexible and adjustable, used to foster American export, to stimulate reciprocal commerce, to meet foreign competition in the export field, a tariff from which politics and "log-rolling" is eliminated, and regarded finally as not only a source of income for the Government, but actually a tool and weapon for the extension of American trade abroad as well as of aid to American industry at home. A non-partisan tariff commission certainly would have met the overwhelming vote of approval of this convention.

Fifth—That America must, if it would win foreign trade in the most logical fields, become the banker and the major creditor for the wise development and upbuilding of those fields; that surplus American capital

must be invested in the regions where American goods are to be sold and foreign goods purchased. "All for one and one for all," as said by James A. Farrell of the United States Steel Corporation and by Percival Farquhar of the Brazil Railways Co., "cannot become applicable to the Americas if Europe supplies the cash for Latin-American needs."

Of course, there were represented varying views concerning ways and means. Edwin F. Sweet, Assistant Secretary of Commerce, presented, for instance, the views of the administration with reference to the merchant marine—and Capt. Robert Dollar put forward the experience and the conclusions of a practical ship-builder, ship owner and ship operator who has felt himself compelled to withdraw from under the American flag under the pressure of congressional action.

Yet even these two agreed that the merchant marine was essential to perform these true functions of shipping:

(1) Furnish facilities for transport of export and import commerce essential to American commercial existence, whose earnings would be returned into the fund of American capital, and whose activities would engage American skilled brains and hands.

(2) Maintain communications, under the flag, with all distant possessions and with all distant markets, without regard to the stress or needs of other nations.

(3) Aid national defense and protect American commerce either in peace or in war.

The entire convention would probably have agreed to the proposal that the Federal Government elect the national shipping board, to be composed of expert shipping and transportation men, with authority to revise the whole mass of American laws affecting the merchant marine and submit the same to Congress, it being understood that the result to be gained would be an American-owned and American-operated merchant marine, able to compete with the marine of foreign powers and yet maintained on American standards of efficiency, pay and living conditions.

"No to-be-expected price, however, is too high to pay for establishment of the marine" would have been the settled judgment of the convention.

On the other points there was less difference. Amendments to the banking laws to permit the establishing of branch banks abroad by co-operation among home banks and various other details were discussed individually. The range of personal talk and of public address, of course, including everything from "co-operation" to advertising, from packing methods to the right system of discounts and acceptances.

A summary of some of the notable speeches delivered at the convention follows:

“Foreign Investment a Measure of Commercial Preparedness”

JAMES A. FARRELL, President United States Steel Corporation, Chairman National Foreign Trade Council.

The fact has to be recognized that there can be no stable prosperity at home unless we are able to make liberal sales of American manufactures abroad. The surplus yield of the products of the soil practically sells itself. Whether as foodstuffs, cotton or copper, it furnishes the raw material of industry in other lands. The fact that, in normal times, about 60 per cent. of our export consists of foodstuffs and raw materials gives a standard of measurement for the enormous possibilities of our mechanical production.

It would pay us better to convert our own raw materials into finished products here than to sell them for conversion abroad. But our advance in that direction will be relatively slow, without a constantly broaden-

ing foreign outlet for articles of American manufacture.

To attain a maximum efficiency for our factories and workshops, they must be operated at their full capacity. Hence, on this ground alone, it is absolutely essential that we should insure against the consequences of recurring periods of domestic depression by cultivating foreign markets. It is thus as much in the interest of the workman as of his employer that provision should be made for the steady sale abroad of the products of the mechanical industry of the United States. It is in the interest of both that the capital needed in that industry should be obtainable on easy terms. But it has been shown that the condition and prospects of

the foreign trade of a given industry are a factor of very considerable weight in determining the value of its securities. In fact, the foreign business of many corporations, since the war began, has been their greatest asset, and the only justification for the operation of their plants on full time.

This profitable employment will end when the war ceases. The need of a foreign outlet will remain, but ability to market the product will not, as in the case of the war contracts, rest merely on ability to make deliveries.

The war has taught our people many things in the domain of economic fact to which they did not give sufficient heed formerly. Not the least valuable of these lessons is the realization how strongly entrenched are our competitors in markets that some of us thought lay open for our occupancy. When the curtailment of European investment in the South American Republics brought their development to a standstill and reduced their purchasing power, we had an object-lesson in the conditions precedent to the development of foreign trade. There was brought home to us the full significance of the fact that British investments alone in Latin-America had reached an aggregate of about \$4,000,000,000, which was sent there in the form of goods of British manufacture. The yearly installments which went to the making of that impressive total swelled the annual sum of British exports, as did also the proportion of the income that was left in the hands of the borrowers.

At the outbreak of the war it was intimated that Great Britain stood as the creditor of foreign countries to the amount of \$20,000,000,000. Of this, \$9,240,000,000 was invested in British dominions, colonies and possessions, and \$3,160,000,000 in the United States, leaving \$7,600,000,000 for the rest of the world. Of the annual return on this vast amount, the creditor country has never taken all, but has left a sum ranging between \$600,000,000 and \$800,000,000 for reinvestment.

Other countries have followed the example of Great Britain in providing foreign markets for their products by placing them in the form of loans. The most recent estimates place Germany's investment in South America at \$1,000,000,000, with France not far behind, and Belgium and Holland figuring as large holders of the Government bonds, mortgages and railway securities of the Latin-American Republics.

The United States, up to a very recent date, has held almost no South American securities.

Such experience as our people have had as lenders has demonstrated the familiar truth that the trade follows the loan. Since 1897 there has been invested in Canada \$700,000,000 of American capital. It has gone into the equipment of branch plants for American manufacturers, into mining, timber and agricultural enterprises. American investment has necessarily created a demand for American materials, with the result that, in proportion to its population, Canada is the best customer we have.

In 1897 our total exports to Canada were only a little over \$57,000,000; in 1913 they were \$403,000,000. So, in a lesser degree, with Mexico, where American capital has been freely invested. While the sales of American products there in 1892 amounted to but a little over \$14,000,000, they reached \$61,000,000 in 1911, and even under conditions closely akin to anarchy our exports to Mexico have averaged \$3,000,000 a month.

It is the export of manufactured merchandise whose increased volume must be largely dependent on the readiness of our people to invest in foreign securities. These manufactures fall naturally into two groups: The first comprises general merchandise sold to dealers and consumed by individuals whose choice is regulated only by a desire to obtain satisfactory goods at a low price. The second consists of materials for construction—machinery and equipment required for the development of extensive enterprises. The demand for these follows the possession of borrowed capital for the construction of railways, tramways, port works, power plants, lumber mills, plantations, packing establishments, irrigation projects, mines, factories and mills. With some ~~on~~ all of these it is the constant endeavor of undeveloped countries, whether in South America, the Near East or the Far East, to supply themselves.

The scale on which such enterprises are projected is a constantly-growing one, and millions are now being borrowed where thousands would have been re-

garded as sufficient a quarter of a century ago. Frequently, the loan contracts and arrangements for the supply of material are combined in a single transaction, assuring the supply of materials to the country which provides the funds. Thus railways financed in London will be constructed by British engineers under specifications drawn to favor British products, and, eventually, British rolling stock will be operated on British rails by British officials, and a British character imparted to the demands arising from all the constructive activities stimulated along the right of way of a new road. Railway enterprises promoted by German capital have similarly served German commerce. Spheres of commercial influence have thus been created to the advantage of all interests affiliated directly or remotely with the original loan.

In dealing with the possibilities of the development of our export trade in manufactured products, it is well to remember that we meet with competitors in this field to whom its possession is a question of national existence. This is especially true in the case of Great Britain, whose dependence on a supply of food and the raw materials of industry from abroad imperatively demands the production of manufactured goods to pay for them. It is in the making of this effort that Great Britain has achieved industrial greatness, and the success with which she has done so may be inferred from the fact that, in normal times, the excess of her imports over exports has averaged \$700,000,000 a year. In ordinary years the excess of British imports over exports is met by the interest earned on foreign investments, the earnings of British shipping and the earnings of the banking and insurance houses. The credits from these sources are not only found sufficient to pay for the excess of imports, but have in recent years provided a fund rising as high as \$1,000,000,000 per annum for investment abroad.

By Great Britain, no less than by the other industrial belligerents, the ordinary investment of capital abroad will be largely suspended during the war and must suffer a diminution of volume after it. But the argument that an impoverished Europe will require all that it can save or borrow for domestic rehabilitation overlooks the fact that Europe's foreign investments safeguard the prosperity of her industries. A loan

which brings from abroad a liberal interest return, while insuring employment for a large proportion of the industrial population, is a doubly valuable domestic asset. In this connection the fact may be noted that British manufactures are still being exported at the rate of \$150,000,000 a month.

We certainly never were in so good a position as now to take advantage of the opportunities which the world has to offer.

Since the war began American exports have exceeded imports by \$1,864,612,581. It is estimated that \$1,500,000,000 worth of American securities have been repurchased with a corresponding saving on the annual interest charge which we have been accustomed to remit abroad. This achievement, together with the rapidly growing gold balance, the increased use of dollar exchange, and the successful negotiation of loans which have helped to readjust sterling exchange and finance munition orders, not to mention the loans to Argentina and to Canadian provincial governments, have afforded some justification for the idea that the United States is in process of replacing Great Britain as the world's banker. But, although much has been done to adapt American finance to the opportunities provided by the Federal Reserve Act and by the war, little has been accomplished toward discharging the function of financing the countries which are open for the investment of American capital.

Until we are ready to take advantage of the opening which has been made for us by the drying up of the investment stream of Europe, the title of "World's Banker" will not pass to the western hemisphere. Nor will practical Pan-Americanism become a reality if Europe continues to be the source of the loans necessary to enable our sister republics to develop their latent resources and realize the full degree of their material prosperity.

Foreign investment is a commercial-preparedness measure, a source of protection for the whole industrial fabric of our country, should the world recede to political-commercial policies of trade restriction.

It is an element of strength in our influence as a nation, should a wiser instinct realize that the true guarantee of the world's peace is the provision of equal opportunity for all.

"Some Elements of National Foreign Trade Policy"

FRANK A. VANDERLIP, President National City Bank of New York.

When the war is ended we will find all Europe depleted of its gold, staggering under a weight of inflated bank and government paper, and under the direst stress. To rebuild its stock of gold the point of attack will be our gold reserves. The methods will be every means known to trade and commerce by which merchandise, securities and credits can be exchanged for gold. The laws of political economy will be on the side of the attack. A plethora of gold such as we will have always means rising prices. We will establish a price basis here which will make us a good market to sell in and a bad market to buy in. We are now advancing our labor costs, and that and every other element that enters into production will, under the influence of this great increase in our gold reserves, tend toward high market values.

If we find ourselves when conditions start again toward the normal to be the market where prices are the highest, where the cost of production is the greatest, and where the interest rate is the lowest the road will be open for attack upon our gold reserves. If that attack is successful then the whole credit structure that will have been reared upon it must be rudely reduced, for the reduction in credits must be many fold greater than the loss of gold. What defense can we put up? How can we safeguard ourselves? We have recognized the principle and safeguarded ourselves in a domestic way by the enactment of the Federal Reserve Law, but there can be no safeguarding by law from an international attack upon our gold stock. Other means must be found than any that could be provided by legislation, nor do the means lie in the hands of the bankers. They may recognize the danger and instead of loaning to the limit permitted by law run with strong reserves, but any surplus that we could expect the bankers to hold would suffice for but a short time if the strain were severe. We may invest in short-term for-

ign loans that can be converted into credits to check a gold demand. We have already done some of that, and will probably do a good deal more. There have been bankers so short-sighted as to object to our making any loans abroad, but I believe the day will come when you will find that those loans convertible into credits, as they will be, will check gold withdrawals and form one of the most important safeguards of our gold stock, but efforts in the way of defense, such as excessive reserves or short-term foreign investments, must be as nothing when compared to what is possible in the form of credits created by exports of produce and merchandise. There is the strength of our defense. Its effective measure will be the size of our exports compared to our imports. The size of that favorable balance must form the true defense of our gold stock, and that is why every citizen, whether he knows it or not, is interested in the subject that this convention came together to consider.

Briefly indicating some of the advantages and handicaps that seem to me most important in our outlook for foreign trade development, among our advantages are our unequalled supplies of cheap food and raw material and our vast home market which gives us a background of large scale manufacturing. This large scale manufacturing, even under the handicap of wages twice those paid by some of our competitors, still permits us to manufacture as cheaply as they do.

Among the handicaps are the facts that our merchants are in a measure untrained and inexperienced in foreign trade. Our laws are framed to prohibit co-operation. Although we must face combinations that are not amenable to our laws, we will meet the competition not alone of combined producers, but of combined nations erecting tariff barriers specially designed to impede us.

Can we with our political theories of compelled competition stand up against the united co-operative ef-

forts that we will meet from our competitors? Will our Government theory of destroying combinations, no matter how economic in their results, win in a field of neutral competition where our competitors are not so handicapped? It may be so, but when we go into neutral markets we operate under fixed economic laws that Congress can neither alter nor abolish, and we will succeed or fail in the measure in which we place ourselves in accord with those laws.

Among our most notable handicaps in building up world trade will be our lack of national transportation. Our goods must be sent to our customers in the delivery wagons of our competitors. Will they always give us a fair deal? The vast possibilities for trade with the Orient today are wholly at the mercy of transportation lines under foreign flags. The trouble is not with American capital. There is ample capital and to spare ready to embark in a development of American shipping, asking no Government aid but only the opportunity to be placed upon an equal footing with the capital of other countries. American capital today owns a million tons of shipping tonnage that it is forced to sail under foreign flags, not because it lacks Government aid, but because it has had imposed upon it Government restrictions that make competition under normal conditions well-nigh impossible.

There is an effort now to give Government aid in the attempt to pass a fifty-million-dollar shipping bill. Several times \$50,000,000 of private capital could be commanded if private capital could have permanent assurance that American capital could enter the world's field of shipping not handicapped by governmental regulations from which the capital of other countries is free. In these abnormal times when a ship can be sold for four times what it cost, and when a single cargo has been known to bring in a return equal to the whole cost of the ship that carried it, it is possible to sail ships under our flag, but even then with us it is possible only because the seamen's act is but partially enforced. If it were enforced to the letter and the spirit in which it is written, it would be so obnoxious to the commercial life of this country that its immediate repeal would be inevitable.

I do not believe the business life of the country is awake to what it means to have its foreign commerce almost wholly at the mercy of transportation under foreign flags. The reason that is so is not because capital craves Government aid, but because it cannot make progress against insurmountable Government handicaps. I believe the real basis of those handicaps does not stand on any honest conception of which is best for the economic welfare of the whole country. Instead, they rest in demagogic class legislation, and the character of that legislation is not so much partisan as it is merely political. We will have the handicap of political institutions which have come to regard the tariff as a political question to be handled by politicians, and we will face the competition of countries that have well developed the closest co-operation between governmental and business agencies in devising and administering tariffs as scientific instruments for national commercial development and defense.

We are a nation of amateurs in the drafting of commercial treaties, and we are coming into a period when the commercial treaties will be among the main foundation stones of commerce. What preparedness have we for a tariff war? Have we mastered the science of such warfare with anything like the thoroughness that our competitors have? Are we prepared intelligently and patriotically to co-operate in waging it, making of the tariff an instrument for national service, rather than a field for the display of individual and political selfishness?

The conditions of competition after the war will contain factors distinctly in our favor. Four hundred and fifty million of the world's population are now engaging in war; 25,000,000 men are under arms. The actual loss of effective labor units will make a hideous total, and in that loss will be included, besides a mere economic destruction of labor, the loss of technical skill, of trained expertness, of experienced ability, that will be hard to measure in pounds or marks or francs. Our competitors will be staggering under almost unthinkable debts, and industry must bear a burden of taxation which will go far to reduce its effective competition in neutral markets. Our competitors may find in their home market prices on the inflated basis of an almost unlimited issue of paper currency, now well under way, and will have to go through all the travail and pain of

getting back to a sound gold standard before they can trade with the world on equal terms. The exhaustion of capital in Europe will force industry to pay high rates of interest. Ample mercantile credits to foreigners, which have in times past been such an aid to European foreign commerce, will be far more difficult to give.

We may confidently expect that the nations now at war will use every method of legislation to benefit their position, and they are likely to be far more prompt and intelligent in the application of these means than we will be. It seems probable that there will be a tariff union, not only between Great Britain and her colonies, but between Great Britain and her allies, and probably another tariff union of the Central European Powers. There have been vast experiments in State socialism, and there may be in those experiments something of economic value that will be retained. We have seen the Government of Great Britain take over the railroads of England in a single day and operate them as an effective unit. There may be many lessons of economic co-operation learned which will go far to repair the damage which the war will have wrought. Germany has shown us a kind of State socialism that marshals and co-ordinates every industrial factor of the nation, and it may be that we will eventually find serious handicaps from new economic forces of this nature. * * * My feeling is that business men are not paying the attention they should toward seeing that the men to

whom they delegate the great responsibility of government are the right type of men. Whom of you would delegate to the average Congressman the conduct of a vital and complicated part of your business? If you did, and a man of that type was wholly responsible to you, you would still probably fare badly because his lack of experience, his point of view, his temperament were not such that he would handle wisely and unselfishly the work with which you entrusted him. How much less is it likely that that work will be satisfactorily performed by men thus lacking experience who do not feel responsible for the success or failure of business, but only feel responsible for influencing votes that are often cast without understanding of the intricate problems and the great principles involved?

We have heard in recent years much criticism of business by Congress. I should like to see effective criticism of Congress by business. We have seen many men sent to Congress from both parties who are unfit to make the momentous decisions affecting the nation that they are entrusted to make. I believe the fault lies with business men. They have failed to make their knowledge and experience felt. They have not demanded the participation in the councils of government that they are entitled to have, and which the best interests of the country demand that they should have. * * * The politicians will follow public opinion. You are the sort of men who can make public opinion if you choose to.

"The Relation of American Railroads to Development of Foreign Trade"

FAIRFAX HARRISON, President, Southern Railway Co.

To enable the railroads to be of the largest co-operative service in the development of foreign trade there must be progressive modifications of pre-existing practices in the relations of the railroads and the ports.

The elemental function of a railroad—to facilitate the exchange of commodities between more or less widely separated communities—is not affected by the destination, whether it be domestic or foreign. But foreign commerce requires of a railroad more than its elemental function.

Generally speaking, in this country facilities at the ports for the interchange of export and import traffic have been provided by the railroads themselves. In numerous cases several railroads serving a single port have each provided independent waterfront terminals, and railroads serving more than one port have provided separate facilities for each port served, thus involving large investments of capital for which there has been no adequate return.

Such conditions are economically unsound and must come to an end if economy of transportation is, in a national sense, to be a factor in the increase of the volume of our export and import traffic.

Export commerce will always seek the line of least resistance. It will go to the point where the service is best, storage facilities are most readily accessible, and most of all where there are ships. To bring the ships the successful port seeks above all to develop its import traffic and its banking facilities. Next in importance, the port itself should provide terminal facilities for the exchange of tonnage between rail and water carriers.

Seaport communities desiring to participate in the benefits of foreign commerce and to obtain a competitive advantage over other available ports should provide the necessary terminal facilities either through municipal ownership or through local terminal companies and thus undertake the responsibility of supplying facilities without discrimination for all ships and all railroads reaching the port, and further, they should impose charges upon the traffic, rather than upon the railroad, sufficient to make the terminal self-supporting.

As a large proportion of the products of the United States, either as raw materials or manufactured commodities, find, or after domestic needs have been met, ought to find, markets in foreign countries, the carriage of these products to the seaports make up such a large part of the business of the railroads that they may properly shape their policies as to encourage this business.

It should be the purpose of every patriotic American

that a substantial part of our energy should be devoted to the manufacture and exportation of articles which may find markets abroad. Especially is this true for the reason that by developing a steady foreign trade we insure to our manufacturers a very present help in times of depression at home in the form of a constant revenue from sources unaffected by economic conditions which may temporarily diminish business profits in the United States.

As a practical illustration of this which may come home to us here in the South, I may refer to the fact that when, on the outbreak of the European war, the cotton market collapsed and business was profoundly depressed throughout the South, Chattanooga felt the depression relatively less than other Southern cities because her manufacturers were then and ever since have been selling goods in the markets of every continent and of all the islands of the seven seas.

One of our strongest and most aggressive competitors in the future, as in the past, will be Germany. The value of German annual exports (including precious metals) increased in 33 years to the extent of more than \$836,000,000. That country, where the fostering of foreign trade has been secondary only to the creation of the wonderful military machine of the Empire, has in comparatively recent years made greater strides in the development of manufacturing industry and in the exportation of their products than has any other nation.

The German railways have given most effective aid in the development of that country's great export traffic. They have applied special rates on export traffic lower than on domestic traffic, and again special rates lower on export traffic to German ports than on that passing into or through other countries by rail. In their rates to German ports for export they make distinctions in their charges to meet the necessities of competition, differing in degree as to different territories of destination.

Our railroads in the United States must do these things if our people are to enter broadly into competition with other countries for a world-wide trade. And they are ready and willing to do so if they do not thereby endanger the entire fabric of the domestic rates. The railroads of the United States must be allowed to do these things without being charged with, and penalized for, discrimination against domestic traffic.

The railways of the United States have not been less effective than those of Germany or of any other country in regard to service or charges. We haul export grain

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of government would be a product of a man. If you are responsible to him because his permanent record is unsatisfactory. How many are satisfied with the failure of the nation? The fault lies in their own lack of foresight. It is not the government's best interest which could have been in the opinion of the public.

Great strides have been made in the last year, and many new, and with us unprecedented, things have been done. The National Foreign Trade Council has been a large factor in this patriotic stimulus of progress. Some of the railways also have done some of these things, but speaking of the problem as a whole, and of the railways as a part of it, it may be said that the railways are managed by men who are alert to change their methods when advantage of change is even darkly hinted, and that they may be expected to do their part in whatever is really necessary.

It has already been demonstrated that the railroads

may aid effectively in the development of foreign commerce by co-operation with the producing communities and the seaports which they serve. The railroad may properly gather and make available to shippers information as to foreign markets, as to customs laws and port regulations, as to methods of packing and shipping and as to all other matters that may be helpful in building up export business. It may, with equal propriety, advise merchants in other countries where and from whom in the territory served by it they may buy such commodities as they want.

It is service such as this that Southern Railway Co. and the companies associated with it have undertaken to perform with respect to trade with the countries of South and Central America and, to some extent, with other foreign countries, through their South American agency, through foreign freight agents at New Orleans and Mobile, and through freight traffic agents at other seaports. I am glad to be able to report that this special service is now beginning to show real results and to justify the experiment.

"World Trade Conditions After the War"

ALBA B. JOHNSON, President of the Baldwin Locomotive Works, Philadelphia.

Predicting a period of "feverish activity in this country during the continuance of the war, and upon its close a prostration of the industry and commerce of all countries," Mr. Johnson in the opening address at the Third National Foreign Trade Convention in New Orleans today emphasized the necessity for a truly national foreign trade policy which would prepare the United States for the keener competition expected to prevail in world markets after the war. He said:

"It will be necessary for us to learn team-work, by which is meant correlation of the efforts of manufacturer, merchant, banker and investor. Hitherto our bankers have been reluctant to enter the field of foreign finance; commission houses have too frequently been free lances, pushing trade along the lines of least resistance or not in such a way as to create permanent and reliable trade. Our manufacturers have had to fight single-handed for their foreign trade, and it is wonderful how well they have succeeded in view of the conditions of competition which they had had to meet.

"The creation of the Federal Trade Commission must prove to be of great benefit to our manufacturers and exporters. It is studying with minds free from prejudice the complicated problems which affect our export trade, and I am sure they will remove any doubts as to the rights of Americans to arrange for combinations for foreign trade such as are lawful for their competitors of other nations."

Further considering the conditions after the war, Mr. Johnson said:

"When the first peace negotiations begin, the uncompleted portions of all the vast volume of the foreign war contracts which are being executed in this country will be suspended. Thousands of men will be deprived of employment, numberless inflowing streams of gold and profit will be stopped and business of every kind

will suffer a dislocation. In Europe the return of men now under arms, together with the cessation of work on arms and munitions, will alike affect the belligerent countries as well as ourselves, and great numbers of men will be forced again to seek employment. * * * Except in war stocks and automobile finance, there has been no undue financial expansion in this country. A guaranty of safety is to be found in continuing this conservative course. * * * There can be little danger of a shortage of money after the war, because the money now employed as working capital in filling war orders will be released, and because the demands from Europe for war loans will cease. The amount of idle money then will be large until re-absorbed in legitimate business enterprises at home and abroad. Our railroads have shared the improved conditions due to abundant crops and war business, and during the last three months of 1915 have experienced a large increase in earnings. * * * The fact is, however, that under normal conditions their rates are dangerously close to the cost of the service. * * * It is of vital importance to every other interest that the railroads should be placed upon a permanent basis of soundness and prosperity."

Mr. Johnson declared that the tariff commission was necessary to enable the policy of the United States to be adapted to changing conditions abroad, and called attention to the recommendation of the National Foreign Trade Council for the appointment of a Government Shipping Board to recommend to Congress the policy necessary to establish an American Merchant Marine on a sound basis in the foreign trade.

He called attention to the possibility of economic alliances among those countries which had united their fortunes for war, and upon the possible adverse effect of such policies upon the trade of the United States.

"Co-operation in Foreign Trade"

JOSEPH E. DAVIES, Chairman Federal Trade Commission, Washington, D. C.

Declaring that epochal opportunity confronts American business today in foreign trade, and that probably never again will so propitious an opportunity present itself, Mr. Davies analyzed some of the general problems of foreign trade and pointed out the steps that American manufacturers will have to take and the competition they will encounter in efforts to develop and hold foreign commerce. Our exports are of two classes, two-thirds of which are foodstuffs and materials to be used in manufacture abroad and one-third manufactured articles, generally of two classes—specialties and staples. The raw materials, foodstuffs, etc., sell themselves, while a demand must be created and foreign competition met in the case of the manufactured articles.

The replies to inquiries made by the Federal Trade Commission indicated that the large institutions of this country do not feel the need of co-operative effort to

secure foreign trade. The smaller concerns desire co-operation, for reasons that selling costs, if handled alone, would consume all profit, and that by co-operation a better medium of presenting products to a foreign market at less expense can be secured.

Emphasis was laid on the importance of an extension of foreign trade as a stabilizing influence and because of the contribution to national wealth that foreign trade brings.

An outline was given of the character of competition that American trade will be required to meet in foreign fields, the conditions of which will undoubtedly be emphasized and intensified after the war closes. Under circumstances following the war, the embarkation of American enterprise into foreign trade, and its maintenance there, will require the strongest initiative and the highest order of business intelligence.

A combination of non-competing manufacturing

plants of Great Britain, for instance, are equipped to establish, and have established, joint selling agencies, with branch offices and warehouses, and with such effective organizations that they are equipped to handle any kind of service within their lines, from the sale of a handsaw to the building of a railroad.

Much of the Oriental business of Germany is alleged to have been acquired through so-called "rings," which include representatives of every kind of industry whose goods or services might be required. The markets are scientifically studied and assiduously cultivated. In one of these rings 48 different German manufacturers participated. Its organization with the local bank and home bank connections was complete. It had within its organization facilities for selling to a Chinaman a five-cent file, or for planning, financing and completing the industrial development of an entire province, opening harbors, building railways and telegraph lines, sinking mines, erecting factories, installing light and power plants, and even to clothing the people and marketing of their products.

But still more significant than these isolated instances are the suggestive activities which a survey of international commerce will disclose. Some of these facts are, briefly, these:

At the University of Kiel there has existed, and does now exist, an institute for the study of world trade, subsidized by the Imperial Government of Germany, and organized with a corps of highly-trained economists.

In Turkey during the last several years a German trade paper has been published daily in both French and German.

The Imperial Government of Japan has projected its enterprise into foreign countries, with its government monopolies of salt, camphor and tobacco.

In Chosen, which is the new name for Korea, it is significant that there has been established an institute for the development of native Japanese chemical and industrial engineers. It is generally recognized that exporting and marketing Japanese firms threaten the complete domination of the Chinese trade.

It was declared that there is an erroneous impression among business men of all classes as to the prohibition by the laws of the United States against co-operative effort in export trade.

The danger which is most imminent to the development of our foreign trade at this moment does not lie within any limitation of law. It comes from business itself and the imminence of unprecedented domestic prosperity. The conquest of the foreign market is a slow, laborious and painstaking project. The convenience of the home market, its greater demand, and the large profits of great domestic prosperity may seriously impede the development of the foreign field. The remedy for that condition lies solely with the good judgment, the farsightedness and the longheadedness of American business, which will place the wisdom of building upon a strong, secure foundation before large profits and temporary prosperity.

"The Problem of Anti-Dumping Tariff Legislation."

HENRY C. EMERY, Former Chairman of the United States Tariff Board.

In his paper Mr. Emery declared that selling goods in one market cheaper than another was economically sound and that the United States should not hastily adopt any anti-dumping policy which might lead other nations to retaliate against the American foreign trade in manufactures, many of which are sold cheaper abroad than at home. He said:

"The general feeling seems to be that the practice of dumping is something new, something abnormal and necessarily sporadic, something immoral or improper, something which will threaten us with an entirely new and grave danger at the close of the European war.

"I submit in reply that the practice of dumping is as old as the world market; that the practice may be entirely normal and continuous rather than sporadic; that in its ordinary meaning and most general forms it is not immoral or improper; that the real danger which threatens us after the European war is not that European manufacturers will sell goods in our market below their own cost of production, but that they will sell goods below our cost at home. Besides the infer-

South Does Not Value Cotton Above Lives of Murdered Citizens*

RINGING DECLARATION OF SOUTH'S REAL SENTIMENT—SORDID MOTIVES THAT BY TRUE SOUTHERNERS ARE HELD IN SCORN.

By JOHN SHARP WILLIAMS, Senator from Mississippi.

A great deal has been said on the floor of the Senate about the cotton situation and about the seizure of United States mails by the British authorities. What England has done about our mails is wrong. But the fact that I have refused to get excited over these wrongs has led some to believe that I do not care. Well, I do not care enough for these wrongs to shed blood about them—to prepare for and declare war on that account alone. But I must not be misunderstood. I do not care to shed blood over our mails, because I do not think my mail is important enough for that, and I do not think the mail of the average citizen of the United States is. Yet I resent these acts of a belligerent which violate neutral rights. I would not surrender one neutral right in the world. I would declare and re-declare every one of them. I would protest against every violation, but I would not shed blood about base merchandise if I could help it. The only thing I would shed blood about is blood.

I am a provincialist, an ultra Southerner, and I know my people. I know the men who followed Jackson and Lee and whose wives and children starved and who themselves starved in what they thought a holy cause—the men who followed Stonewall Jackson in his last campaign up the valley, when they had nothing to eat but parched corn and were rationed like the horses, except that the horses ate the corn raw and they ate it parched—are not ready to put cotton and human life upon the same level, and especially when they have sense enough to know that it would not even help cotton if they did, and that the only hope for cotton is keeping open the English, French, Italian and neutral markets of the world.

Where damages may be measured in terms of money we ought to claim money in damages, and where there is nothing at stake except money we ought not to shed blood in order to constitute for ourselves a remedy. The proper day of reckoning will come under our treaties and under general international law, and lodging a protest is better than to fight about money if the sole cause of the quarrel be either money or base merchandise. All quarrels about money can be cured with money, and all delay in curing them with money is measured by universal agreement by a rate of interest. This would accomplish about what the United States did in the case of the Geneva award. Abraham Lincoln and Seward and the men other than Seward did not push that matter just at that time, but when the proper time came they did push it.

But so much has been said about what the belligerents are doing to us, as a neutral nation, that it is about time we were recognizing facts, and, above all things, I do not want to see Dixie, I do not want to see Georgia, Mississippi and old Virginia, and the volunteer State of Tennessee, and her sisters, Louisiana, Arkansas and the Carolinas, and all the other Southern States, put in the attitude of seeming, at any rate, to care just as much about property as they do about life; of seeming, at any rate, to care more about their particular property, which is the cotton crop, than they do about the women and children that went down unknobbed and unshaven to their graves in the sea.

I have come to the conclusion that the forces making for peace and liberty and honor and contract-keeping and righteousness in this world have got somehow to whip the forces that are fighting for the other and opposite things.

It has been alleged—and this has been made the cause for nagging the President—that the British censors take our private business letters and hand them over to British business concerns, so that the latter may learn the trade secrets of our business men and thus promote England's commerce. Well, for one thing

to sign the measures which have been advocated, it would necessarily result in commercial non-intercourse with the allies. Then what would follow? Then what becomes of cotton? Cut off the British market and cut off the French and the Italian market and their colonies and their dependencies, and cotton would not be worth 4 cents a pound after next week.

There are those who claim that this commercial non-intercourse is an impossibility. But I cannot imagine that the allies are going to stand still like a lot of whipped curs while they are engaged in a war which they believe to be for life and liberty and for national independence, and obey the ukase of a United States Congress, with 90,000 men in the army and only the fourth navy in the world behind its ukase. It is absurd to suppose that they would be cowardly enough to stand bullying from a people who cannot bully because they have nothing behind them to bully with, and who cannot bluff because they hold no hand.

Do the supporters of an embargo on munitions of war believe for a moment that Great Britain and her allies—and the balance of the world that they propose to put an embargo on in the shipment of ammunition and munitions of war, contrary to our traditional theory, unless they change their paper blockade, if we choose to call it a paper blockade, but which seems to be wonderfully effective, because it stops every ship, which is more than the Northern blockade did during the war between the States—that the allies, to repeat, would lie down in a fight which they believe to be a fight for the liberty and independence of the world against a newer Roman Empire, revamped and re-vanished? Will the allies lie down? Of course not.

I cannot see that the question of cotton, or other merchandise, or the seizure of our mails, would justify us in summoning American boys to the colors, unprepared, undrilled, untrained, to go and fight trained soldiers. The reason would be a poor one, and the results would be worse.

CLOSER TRADE RELATIONS WITH RUSSIA

American-Russian Chamber of Commerce
Formed With Directorate of Strong Names.

New York, February 1—[Special.]—The formation of the American-Russian Chamber of Commerce, brought about by interests which have important business dealings with Russia, is another forward step in the general foreign trade plan which has for its ultimate aim the ousting of Germany by the United States in the selling of goods and manufactured products to Germany.

There is to be co-operation with the Russian-American Chamber of Commerce of Moscow for the exchange of useful information. Encouragement of economic, commercial and industrial relations between the United States and Russia will be one of the chief aims of the new organization.

Practical assistance is to be given to the organization of Russian-American agencies for the purpose of handling and financing direct business negotiations between the United States and Russia. The membership of the new association is a guarantee that it will be an active and powerful force in the effort to establish the United States as the supply house for Russian needs.

Charles H. Boynton, president of the Chamber, is head of the Stock Exchange firm of Boynton & Co. He had valuable training in Russian methods while stationed in Petrograd. Associated with him in the directorate are Samuel McRoberts, first vice-president National City Bank; Darwin P. Kingsley, president New York Life Insurance Co.; Charles H. Sabin, president Guaranty Trust Co.; A. Barton Hepburn, chairman of the board, Chase National Bank.

Among the important firms which have already become members of the association are: American International Corporation; International Harvester Co.; Westinghouse Electric Manufacturing Co.; American Woolen Co.; United States Corporation; Midvale Steel Co.; National City Co.

The requirements of Russia for machinery, heretofore supplied by Germany, are to be brought to American attention.

*Compiled from speech of Senator Williams in U. S. Senate January 20, and in this form authorized by him for publication in MANUFACTURERS RECORD.

Millions Spent in Reconstruction of St. Louis, Brownsville & Mexico Road

GRAPHIC STORY OF VICISSITUDES OF A PIONEER RAILROAD, NOW IN PROSPEROUS CONDITION—THE VALLEY COUNTRY A GARDEN OF EDEN.

By J. S. PYEATT, Manager for Receiver, Gulf Coast Lines, Houston, Tex.

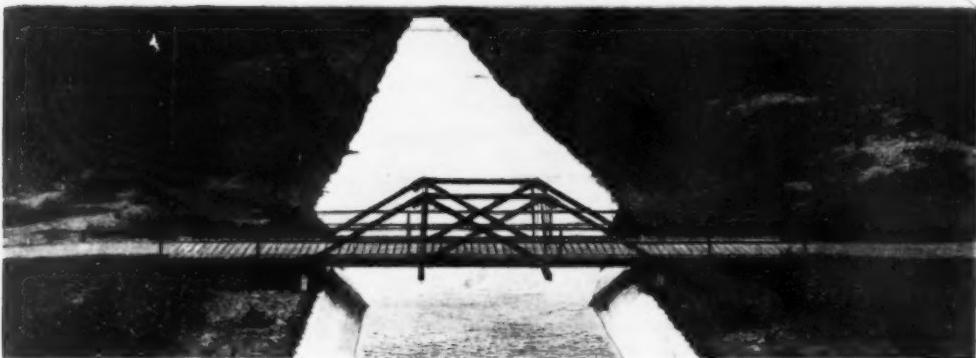
[Expenditure \$1,500,000 in the past two years for roadbed, new bridges and track betterments; \$1,000,000 for new equipment—engines and cars of modern type—while also repairing all the old motive power and equipment, the St. Louis, Brownsville & Mexico Railroad has been practically rebuilt under receivership, and is earning a greater revenue at less operating cost than ever in its history.

The romance of this enterprise is outlined in an article herewith by Mr. J. S. Pyeatt, manager for the receiver of the road. The construction of the road was a daring feat of B. F. Yoakum. With the building of the road a stretch of "cow country," reaching from the Nueces River to the Mexican border, then only sparsely settled by ranchmen, has been transformed into a veritable garden of Eden, with a score of towns and cities and improvements easily worth \$20,000,000.

It is an inspiring story that Mr. Pyeatt tells, and with the widely diversified and extensive productiveness of the "Valley Country," it is a modest statement when he says "the construction of the road is being justified."—Editor Manufacturers Record.]

In the development of American agriculture the pioneers of railroad building have frequently pushed the nose of the iron horse into very unpromising territory. In some notable instances the National Government encouraged such development work with attractive franchises or a lucrative bonus. At other times the

is believed subsequent development will justify its existence. If the road can get even-handed justice from the National and State commissions, who really control its operation, it is satisfied to work out its own destiny toward securing traffic for its support. But this independence of sentiment frequently results disastrously



MAIN CANAL, IRRIGATION SYSTEM, MERCEDES, TEX.

States through which roads were built aided very substantially in such work by land grants of immense value. In addition to this, private parties of cities and towns through which such roads passed contributed liberally in money and property, in order to obtain transportation facilities, but of late years little help of this kind is asked or granted. A railroad is built where it

to a new road that is not connected as a branch line to one of the larger systems—to a road that really tries to "go it alone" in the service of the public.

It takes a broad vision and a stout heart to build a road into an absolutely undeveloped territory, with no connecting parent system to support it during its infancy. In some cases the "infant" has been made to

carry in part, at least, the burden of a crippled parent. But the St. Louis, Brownsville & Mexico road, from Corpus Christi to Brownsville, seems to have been constructed as an independent line.

In July, 1904, the first division between these two towns was completed for a distance of 150 miles. Stretching along the Gulf coast, it passed through only two counties, Nueces and Cameron. Since then two other counties have been created, Kleberg out of Nueces and Willacy out of Cameron. The country through which the railroad passes was a succession of cattle ranches, varying in size from 25,000 acres to 1,080,000 acres. There was not a farm along the entire line of road from Corpus Christi to Brownsville when



TYPE OF FARM RESIDENCES IN THE RIO GRANDE VALLEY.

first constructed. Of course, there was no town, or even village settlement; for towns not supported by mining or manufactures cannot be built without agricultural development. There was, in fact, no place where a traveler between Corpus Christi and Brownsville could find a night's lodging except at the headquarters of three or four of the large ranches. These usually kept "open house" for all who came.

The country, for the most part, was covered with a thick growth of cactus, mesquite and other thorny underbrush. The only visible annual freight for a railroad was a few trainloads of cattle, which, before the construction of the road, had been driven across the country to the nearest railway station, 150 miles from Brownsville with varying less distances as you traveled toward Corpus Christi. The traveler who wanted to reach Brownsville usually went to Alice, a station on the Texas Mexican Railroad and there took the stage for a 150-mile ride to his destination, 40 miles of which passed across a desert of shifting sand.

The fact that the native vegetation over this country was covered with thorns proved that the rainfall was



TYPE OF BANK BUILDINGS BEING ERECTED IN THE VALLEY.

light, for nature protects her vegetable growth in this way from destruction by animals, where an uncertain rainfall precludes a sufficient growth of grass to support the ordinary demand of animal life.

The other divisions of the road, from Corpus Christi to Houston, or more properly, to Algoa, on the Santa Fe, a distance of 245 miles, were not completed until 1907. Now, the main line from Brownsville to Algoa, where it uses the Santa Fe tracks into Houston, together with its various branches, comprise 520 miles of railway. This was all built and successfully operated within a period of seven years. The country from Corpus Christi to Algoa was not quite so barren and forbidding as that from Corpus Christi to Brownsville. There were a few towns, a little agricultural development, with increased rainfall, and a resultant more hopeful agricultural outlook. The country was more open; less timber, except along the streams, which became more frequent, while cactus and thorny undergrowth practically disappeared. Still there was little prospect of freight or evidence of coming traffic. The recurring large cattle ranches were still in evidence—the only resource of the country.



MAIN CANAL, AMERICAN CANAL SYSTEM, MERCEDES, TEX.

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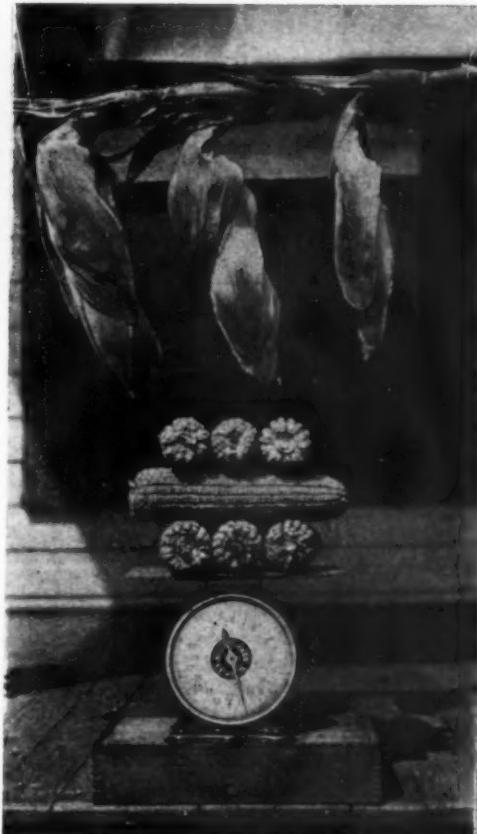
A GRASS INTRODUCED INTO SOUTH TEXAS BY THE BROWNSVILLE ROAD PROVED TO BE A VERY VALUABLE CROP FOR PASTURAGE AND HAY.

It was inevitable that a road built through such a territory, with no strong connecting system to act as a support during the first years of a struggling existence, should meet with financial difficulties. It is true that the road was subsequently attached to the Frisco system, but under circumstances that made it difficult for that road to be of benefit to the Brownsville line. No management, however efficient; no economy, however frugal, could avoid the specter of an operating loss. It had been steadily losing, when, in 1913, after the Frisco system had been placed in the hands of a receiver, a separate receiver was appointed for this road.

I will say something of the rehabilitation of the road, but what I say in this particular is given only as a matter of connecting history. It is the birth of a new country, a birth made possible by the construction of the road, to which I more particularly invite your attention.

When I came to the road, in the early part of 1912, the physical condition of both its roadbed and equipment was unusually bad. Insufficient funds had been available for its proper maintenance, and as a result the cost of operation gradually increased, showing each year a less net revenue in the face of heavy increase in gross. The Frisco system made every effort to meet the demands of the property, but its lack of money and credit prohibited any help beyond payment of operating deficits.

The Frisco was placed in the hands of receivers in May, 1913, and the Brownsville property in July of the same year, after which the receiver promptly arranged for sufficient funds to begin the reconstruction of the road, repairs to equipment and the purchase of sufficient new equipment to handle its business. About \$1,500,000 were spent on the roadbed and rebuilding bridges, putting in ties and ballasting, extending over a period of two years. The motive power and car equipment was repaired and placed in service, and over \$1,000,000 worth of new equipment, engines and cars of modern type, purchased. With the improvement in roadbed and the use of better equipment the operating expenses of the road have greatly diminished, and notwithstanding the decrease in gross earnings compared with former years, when we had the benefit of Mexican



CORN OF RIO GRANDE VALLEY. THREE EARS ON ONE STALK. NINE EARS WEIGH ELEVEN POUNDS.



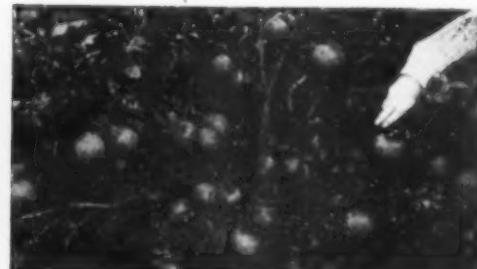
CUTTING CORN, RAYMONDVILLE, TEX., JANUARY 15, 1915.



SCHOOL BUILDING, RAYMONDVILLE, TEX.



BIRD'S-EYE VIEW OF A FOURTEEN-ACRE CITRUS ORCHARD AT RAYMONDVILLE. THIS ORCHARD IS FIVE YEARS OLD, AND PRODUCED LAST YEAR FOUR CARLOADS OF FRUIT.



GRAPEFRUIT, RAYMONDVILLE, TEX.

traffic and more prosperous conditions generally throughout the country, the net revenue of the road is greater than at any time in its history and the operating cost is below the average of Texas roads.

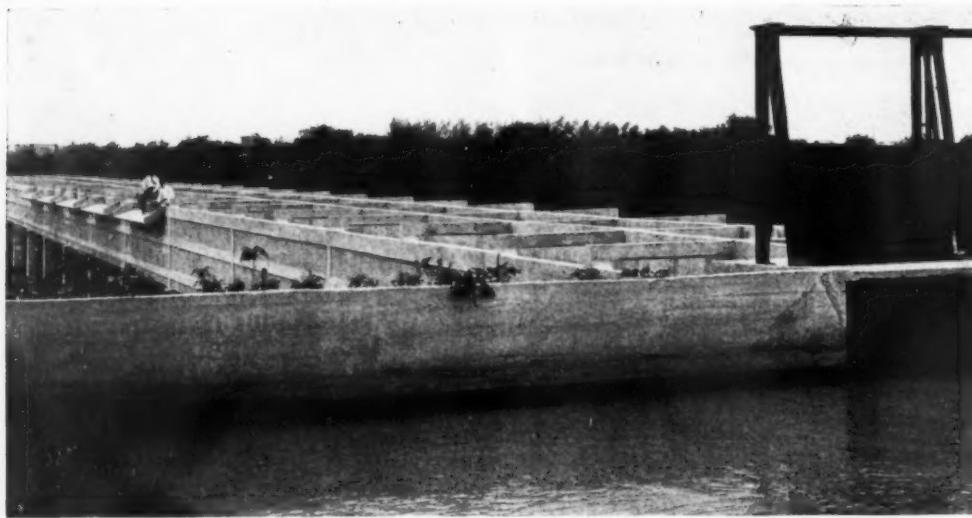
With the exception of 30 miles, the main line from Houston to Brownsville, 372 miles, is ballasted and safe for any ordinary speed of freight and passenger trains.

The St. Louis, Brownsville & Mexico forms a part of what is now known as "the Gulf Coast Lines," the main line of which extends between New Orleans and Brownsville, 750 miles, with a maximum grade of three-tenths of 1 per cent.

I have already called attention to the condition of the country before the railroad was built. I now invite your attention to the country as it has been developed, or at least as it is being developed. For a lack of space, however, I shall only refer to that part of it from Corpus Christi south.

Leaving Corpus Christi, and going toward Brownsville, we pass through the towns of Robstown, Bishop, Kingsville, Riviera, Sarita, Raymondville, Lyford, Harlingen, San Benito and Brownsville. Returning to Harlingen, and leaving from there on the Hidalgo branch, we pass through Mercedes, Donna, San Juan, Edinburg, Pharr, McAllen and Mission. The population of these towns ranges from 500 to 5000 people, all acquired after the road was constructed. They are not merely a mushroom growth. Four of them are county-seats—Kingsville of Kleberg county, Sarita of Willacy county, Edinburg of Hidalgo county and Brownsville of Cameron county. Most of them have systems of electric lights, water and sewer. Some have public libraries, and all have splendid schools, housed in buildings costing from \$40,000 to \$50,000. Their business blocks are substantially constructed, mainly of brick. Kingsville has a hotel that would reflect credit on a city of 50,000 population. The general offices of the railroad are also located there. The railroad shops give employment to about 250 people.

But the crowning jewel of Texas soil and Texas climate is the lower Rio Grande Valley. The agricultural development of that valley during the brief existence of the road is a marvel to every visitor who has been fortunate enough to see it. Nowhere else in the world, perhaps, are conditions more favorable for the establishment of country homes, with ideal surroundings, at a minimum expenditure of time and money, with a maximum attainment of beauty. The moral, social and intellectual standard of the settlers is equal to that of



FLUME OF REINFORCED CONCRETE, IRRIGATION SYSTEM, MERCEDES, TEX.

any other section of the United States or any other country.

It is estimated that in the triangular-shaped tract, having its apex around Mission, 60 miles west of Brownsville, and having as its base a 40-mile stretch along the Gulf coast to the north of Brownsville, there are 500,000 acres of alluvial land. But, of course, only

a comparatively small part of this has been brought into cultivation, about 75,000 acres. At the present time the land and irrigation companies, with their improvements, townsites, sugar mills, grain elevators and mills, would easily appraise \$20,000,000. Two of the pumping plants, belonging to separate systems, are each capable of delivering 300,000 gallons per minute.

This illustrates how quick capital was to recognize and grasp the opportunities that had been made possible by the construction of the railroad. But the small farmer, here as elsewhere in the country, is the most productive capital of the valley. The man who raises winter vegetables, cabbage, cauliflower, head lettuce, Bermuda onions, tomatoes, beans, eggplants, sweet peppers, etc., and then in summer raises his staple crops, corn, cotton, alfalfa, stock beets, sorghum and other hay crops, all to feed his poultry, pigs and dairy cows, while in his yard is growing the most luscious grapefruit raised in the United States, interspersed with trees of the sweetest oranges, while nearby are California grapes that mature in June—these are the men who not only gather the comforts and profits of farm life, but who produce traffic for a railroad.

Perhaps nothing would more emphasize the growth of this valley than a simple statement of the growth of freight.

For the fiscal year July 1, 1907, to July 1, 1908, the road handled 132 cars of livestock, 562 cars of vegetables, 137 cars of all other material. For the fiscal year July 1, 1914, to July 1, 1915, the road handled 1157 cars of livestock, 2592 cars of vegetables, 2451 cars of all other material. "Other material" represents mainly corn and other grains.

And it must be remembered that these shipments are from the valley only. Thus in seven years the total outgoing freight in car lots from the valley increased from \$31 to \$200.

Thus the construction of the road is being justified.

OPPORTUNITIES FOR SOUTHERN MANUFACTURERS IN SOUTH AMERICA.

Report on Observations Made by a Special Trade Representative After a Six Months' Tour.

By CHARLES LYON CHANDLER, South American Agent, Southern Railway Co., Mobile & Ohio Railway, Queen & Crescent Route.

A six months' journey through Brazil, Uruguay, Argentine, Chile, Peru, Ecuador, Panama and Cuba, made recently in the order named, has developed a large number of opportunities for Southern manufacturers in general and particularly for those making textiles and agricultural implements and machinery of all kinds.

This is all the more significant when we consider what some of our Southern firms have already done in this field, some having entered it as far back as 1882, while others since the European war began have made most praiseworthy efforts to secure their share of the South American trade.

The public-spirited initiative of M. L. Shipman, the commissioner of labor and printing of the State of North Carolina, deserves especial recognition, as he is constantly endeavoring, by practical constructive methods, to arouse each of the manufacturing industries of that State to the importance of South America as a permanent market.

The Southern Furniture Manufacturers' Association, whose headquarters are at High Point, N. C., was the first trade organization in the United States to send a representative to South America to investigate the chances there after the European war began. It is just 100 years since the Bernarda, from Wilmington, N. C., sailed into Buenos Aires with a cargo of naval stores.

The largest single item of import into Argentina is coal. The Southern Railway has just completed at Charleston, S. C., its tipple and dock for export coal, which is the superior of any on the Atlantic coast, if not in the world, and Charleston is two days nearer South America than Baltimore.

Argentina imported before the war \$25,000,000 worth of coal annually from England. The English prohibition of coal exports has now been in effect nearly six months. This is a most unusual opportunity for Southern coal operators, particularly those in the Middleborough and East Tennessee districts. They can secure a permanent and steady market for their coal abroad, which will be of great value to them not merely

in times of depression at home, but also as competition increases among the Southern coal fields.

Over \$1,000,000 worth of American coal has been sold in Brazil since the European war, and the market therefor in Uruguay, Chile and other South American countries is well worth investigating.

There is a particularly large market in Argentina for cotton goods of all kinds. Colored piece goods to the value of \$4,357,261 were exported from England to Argentina in 1912. Hosiery worth \$1,101,325 was sent by Germany to Argentina in that year. Over a million dollars' worth of colored yarn was sold by Europe to Argentina annually. Only the indifference of some of our Southern manufacturers to their future outlets has prevented them from securing more of this business.

The exports of cotton goods from the United States to Argentina since the war began have been chiefly from the New England States. I know of one order amounting to over \$100,000 that went to a New England firm which could have been perfectly well supplied by the South. The excuse is frequently given by Southern mills that they are so sold up at home that they cannot take or consider export orders, and they ask, "Why should we bother about them, anyway?" They never stop to consider what a permanent business they could enjoy with only a very little effort and a very few five-cent stamps.

I know of a Southern city where there are two hosiery manufactories. Manager "A" won't hear of export business. He laughs at it. He has enough to sell to Chicago department stores. The sun never sets on Manager "B's" goods. Manager "B" has fully as much domestic trade as Manager "A," but the additional machinery installed in Manager "B's" factory represents permanent foreign orders, mostly from countries 6000 miles away from Dixie.

The South must learn co-operative effort. I have found chambers of commerce in the South that had never heard of the Department of Commerce. On the other hand, the Chattanooga Manufacturers' Association has done more than many cities of the North.

Chattanooga is the only city in the United States—not a made-to-order city—that began exporting within 10 years after it was founded. In Rosario, Argentina, over 6000 miles from Tennessee, I found the three different plow manufacturers of Chattanooga all represented in a large showroom of the leading importing house. Think of it! A Chattanooga exhibit 6000 miles away!

In the southernmost city in the world, Punta Arenas, Chile, Cardwell machines from Richmond are on sale.

We find Georgia hosiery in Guayaquil, but they did

not know in Buenos Aires that apples grew in Virginia until the Southern Railway representative told them. Why should the Argentines buy their apples from Oregon instead of Virginia? But there is one Southern article found in every South American city and town. I refer to oysters, crab meat, shrimp and similar cretaceousainties, which, whether from Biloxi or Newport News, are met with everywhere. I found them dividing the honors of representing Dixie in a Patagonian seaport with a stove from Waynesboro, Va., and a hay fork from Harriman, Tenn.

Incidentally, there is a great market for Southern wagons and carts, to say nothing of many other articles, in the Argentine Patagonian territories of Santa Cruz and the Chubut. Over 1000 Studebaker wagons are sold there annually, as well as Birdsell and Acme wagons from Emigsville, Pa. These wagons are constantly used in Trelew, up and down the very fertile valley of the Chubut River, and in the nearby towns of Rawson and Gaiman.

A large pile of yellow-pine lumber from the South was found at Trelew. The market for Southern lumber is constantly increasing in Argentina. The Department of Commerce sent an able young man, Mr. Roger C. Simmons, to investigate this market, who will travel through the Southern lumber regions in the next few months giving pointers to our exporters.

The leading furniture importer at Santiago, Chile, expressed a marked preference for Southern furniture.

Cottonseed oil commands a wider and wider market in Argentina.

In short, whether or not the South is advanced as far in manufacturing as some other parts of the United States, her opportunities in South America are fully as great. The South Americans will meet us halfway. We must do our share by trying to meet their wants. They want to do business with us, and we must show more of an effort to meet their desires. More and more people are studying Spanish and Portuguese in the Southern States—150 in Brunswick, Ga., one student in every seven at the University of Virginia and 176 in the public schools of Chattanooga, and nearly 500 persons in Birmingham.

Charleston had a direct trade with Buenos Aires as far back as 1807. There is no phase of the responsibility which now rests on the New South more interesting or potentially profitable than the trade of our sister republics, who, through the statesmanlike utterances of our Southern President, are being brought into that closer communion which signifies the peaceful development of the Western World.

Enormous Gas Production from New Oklahoma Oil Field

[Special Correspondence Manufacturers Record.]

Shamrock, Okla., January 29.

The great volume of natural gas uncovered in the Shamrock territory, the new oil field district of the Cushing field, is gradually being increased, and at the present time the total output daily in this field alone amounts to fully one-half billion cubic feet. Several of the big gas wells are shut in, while many are connected with the pipe lines of the Oklahoma Natural Gas Co. and the Creek County or Wichita Natural Gas Co. These two main gas operating companies in this section of the State are campaigning jealously and earnestly to secure the production as fast as it is uncovered.

This district's output daily has been augmented recently by several big wells. The McMann Oil Co. brought in a 30,000,000-cubic-foot gasser on top of the Bartlesville sand on the Nora Williams allotment, two miles south of Shamrock, and a 25,000,000 gasser on top of the same sand on the Mickey farm. The Oklahoma Natural Gas Co. has made connection with the Williams well and the Creek County Gas Co. with the Mickey well, pipe line connections being made during the past week. In the Williams well, in the Wheeler sand, the McMann company got a 15,000,000 gasser, and this is connected with its own 4-inch pipe line to the north field, where the gas is used for drilling and other purposes.

The total daily production of the Williams well is fully 45,000,000 from the various sands, while that from the Mickey well is 65,000,000 cubic feet. The Mickey well was a wild gasser for several weeks, when the gas was encountered in the upper sands, and it is said that the McMann company spent \$45,000 on this one well in putting into practice the mud-laden or lubricating system for controlling the gas. The second well on the Mickey farm is also a 20,000,000 gasser, in the Layton sand, while C. B. Shaffer has a 30,000,000 gasser in his first well on the Chastain farm, an offset well to the McMann company's on the Nora Williams farm.

The gas pressure in the Williams farm well was so strong that when the sand was encountered the gas blew the drilling tools out of the hole and well up into the derrick. In descending the tools struck the walking beam and splintered it, notwithstanding that this is an oak timber 12 inches by 18 inches in thickness. It was found impossible to drill farther down to the oil sand until the head of the gas is off. The deep gas in this well was found at 2845 feet, and in the Mickey well at 2660 feet.

The Hill Oil & Gas Co., which has 5400 acres under lease just east and northeast of Shamrock, has 100,000,000 cubic feet of gas shut in on its properties, and is also furnishing 10,000,000 cubic feet daily to the Oklahoma Natural Gas Co., which has one of its main pumping or compressing stations at Shamrock. This supply of the Hill company is being increased weekly, and it is estimated that within another 12 months, with the present drilling activity continued, this company alone will have a daily output of gas amounting to 500,000,000 cubic feet.

In the territory north of Shamrock and including a big portion of the original Cushing field, there are many big producing gas wells, almost all of which are connected with the pipe lines. Another big gasser was added to this territory recently, when the Producers' Oil Co. got a 35,000,000 producer on the M. Gooden farm, two miles and a half north of Shamrock. The old Cushing field has been a wonderful gas-producing area, but there has been a lack of gas completions there during the past year, and the rock pressure has greatly diminished. In the old field, too, the waste of gas was enormous for several years, being estimated at 500,000,000 cubic feet daily.

A law was enacted by the last Legislature putting strict gas conservation regulations into effect, and since it became operative, on September 1 last, the waste of gas has been greatly curtailed. Both State and Government conservation officers are busy all the time guarding the gas production and preventing waste. Only recently it is understood that the State Corporation Commission forbade the sale of gas of the supply from

a well south of Shamrock, alleging that two gas sands had been bradheaded together, thus causing much underground waste. This particular well was controlled by the companies with great difficulty, because of the gas pressure. It has been a 35,000,000 cubic foot daily producer. The conservation officers are said to be investigating this alleged practice by oil-producing companies, particularly in the Shamrock district.

During 1915 there were 1,735,100,000 cubic feet of natural gas developed in this State, or that much in addition to the 1914 total production, which amounted to 78,167,414,000 cubic feet. The last figures are those of the United States Geological Survey, and 1914 showed an increase of 3,000,000,000 cubic feet over 1913. The Creek district of Oklahoma, including the Shamrock field, led the other districts of the State in 1915 new production with 1,000,000,000 cubic feet to its credit, or almost two-thirds of the total for the State. This district includes the long strip of territory from Tulsa south to McIntosh county and west from Tulsa across the Shamrock field to the old Oklahoma-Indian Territory boundary.

During 1915 there were 350 gas wells completed in Oklahoma, of which 152 were in the Creek district. The Shamrock field was not opened until late in the year, and the months of November and December show big increases in new gas production for the State over the previous months. November was credited with 280,950,000 cubic feet and December with 300,000,000 cubic feet, whereas May was the third greatest producing month, with 179,500,000 cubic feet. During December the Creek district development amounted to 112,750,000 cubic feet.

The greatly-increased price of crude oil, together with the far greater demand for natural gas, is causing a drilling campaign in wildcat territory in Oklahoma that was never known before. This is causing new gas districts to be uncovered, and the total amount of wildcat gas developed during December was 28,000,000 cubic feet, whereas for the entire year of 1915 it amounted to 71,000,000 cubic feet.

Only recently in wildcat territory the Roxanna Petroleum Co. brought in a 20,000,000 gasser near Ingalls, Watchorn and associates got a 35,000,000 producer near Pawnee, the Oklahoma Natural a 30,000,000 well northeast of Cushing, the New England Company a 20,000,000 gasser near Yale, McGinley and others a 15,000,000 well near Bald Hill, and the Corsicana Petroleum Co. a 10,000,000 producer in Pontotoc county, while other smaller producers were brought in by companies in LeFlore, Pittsburg and Carter counties.

One of the most important wildcat gas wells is that of the Gypsy Oil Co. near the town of Fox, north of the Healdton oil field. This is a 35,000,000 gasser. The McMann company got a 25,000,000 gas producer on the south edge of the Healdton field, near Ringling.

The most important recent announcement in the natural gas game, so far as Oklahoma is concerned, is that B. B. Jones of Bristow, perhaps the wealthiest independent oil magnate in the United States, has made contracts that give him charge of almost the entire gas production of the Blackwell oil field, one of the heaviest gas producers in the Mid-Continent field. He has purchased the gas line of the People's Fuel & Supply Co. from Blackwell to Chilocco for a consideration said to be close to \$100,000, has made a contract with the Blackwell Oil & Gas Co. to take 10,000,000 cubic feet of gas daily at three cents a foot, and is said to have options on the gas properties of the Southwestern Oil Co. and the Kay & Kiowa Oil Co., all in the Blackwell field.

It is expected that this deal will mean the construction of additional gas pipe lines in the State and Kansas, it being understood that Jones already has a market for a big amount of his gas production. It is said he will deliver gas to the Kansas Natural Gas Co. at the Kansas State line and to the Kay County Gas Co., which supplies Ponca City, Newkirk and other cities in that section of the State. He has secured for his gas superintendent P. G. McKeon, formerly superin-

tendent for the Quapaw Gas Co., a subsidiary of the Wichita Natural.

A gas pipe line is being laid from the Blackwell field to Enid, where a franchise was recently voted to the Oklahoma Gas & Electric Co., an organization that buys its supply from the Oklahoma Natural. This is an arrangement similar to the one whereby Oklahoma City gets its gas supply. The Bruner Association of Oklahoma City has had the plans completed for several weeks to lay pipe lines from the Yale wells to Pawnee and Stillwater, but recently gas wells have been brought in near both of those cities, and the Bruner plans may be altered. Bird S. McQuire and Fred Liscum, who own the gas franchises at Hallett, Jennings and other towns, will lay a line to the Markham well, four miles east of Jennings.

The Caney River Gas Co., a subsidiary of the Oklahoma Natural, has completed a 12-inch line from Tulsa south to the Haskell pumping station of the Oklahoma Natural. The city of Muskogee will have a gas line of its own, 30 miles long, to the Checotah field, where there is a daily supply of 27,000,000 cubic feet, and the city of Arkansas City, Kan., will also lay a municipally-owned line to the Blackwell field.

At the Shamrock plant of the Oklahoma Natural Gas Co. a total of 30,000,000 cubic feet of gas is being handled daily, and the company has other pumping or compressing stations at Kelleyville, Mounds, Jenks, Owasso and Haskell. The Shamrock station is now equipped with three 450-horse-power engines, and a fourth is soon to be installed.

C. M. SARCHET.

SERIOUS FREIGHT BLOCKADE IN NEW YORK.

Entire Port Situation the Most Troublesome and Menacing Ever Known.

New York, January 31—[Special.]—Complete embargo on all freight billed for export by way of the port of New York declared by the Pennsylvania Railroad gives the blockade its most serious phase to date. It also applies to all freight consigned for transshipment over the New York, New Haven & Hartford Railroad with the sole exception of perishable freight and fuel coal intended for New England.

The complete embargo was declared because at the time the Pennsylvania had on its tracks booked for points east of Trenton and awaiting unloading over 25,000 cars. Of this grand total, more than 5000 cars were billed for New England points.

A strike of freight handlers employed in the Long Island City yards increased briefly the seriousness of the freight situation.

Because of the embargo against the New Haven road, industrial New England is facing a crisis. A threatened exhaustion of raw materials essential to keep going many great industrial plants of that section may soon become a fact. To avert this, extraordinary efforts are being made by the New Haven.

The entire port situation is causing worry, because, however energetic the work to restore normal conditions, there is no abatement of the tremendous rush of American products abroad. If on its heels there should come any relaxing of effort because of difficulty over the proposed eight-hour basic workday for train service men, great losses in the country's export trade might result.

As one way of helping to avert this, it is suggested that the railroads form a nation-wide organization of railway managers. Wall Street financiers, vitally interested in what happens to American roads, are said to approve of some such general plan. They appear to favor a national conference.

Meantime the Interstate Commerce Commission is gathering facts relating to the freight blockade at this port.

Seeking Location for Manufacturing Plant.

Organizations interested in securing the establishment of manufacturing enterprises are invited to correspond with X. Y. Z., care the MANUFACTURERS RECORD. Correspondence will be forwarded to Pennsylvania manufacturers who have been engaged since 1861 in the production of white ash butter tubs, apple and truck barrels and shooks for export, and who are seeking a location for another plant.

The Voice of the True South Which Would Not Sell Its Honor for Cotton

[Many Southern newspapers express with extreme vigor their bitter opposition to the policy which would place the price of cotton above that of human lives, and which would seek to lead the South to sell its soul for the price of cotton. They give voice to the question asked months ago by the Manufacturers Record, "What would it profit the South to gain the whole world for its cotton and lose its own soul?"

We give a few extracts from many editorials in leading Southern papers, which express the real sentiment of this section.—
Editor Manufacturers Record.]

From Us—Not of Us.

[Macon (Ga.) Telegraph.]

Smith is from us—not of us. The senior Senator from Georgia never felt for anybody but Hoke Smith since the day when he first let out an infant squall for more liquid nourishment. The difference between him and Williams is right there.

The particularly humiliating thing to Georgians is that Smith has so misjudged them, because they know he is spouting a doctrine he feels will appeal to them. The fact that were he a private citizen it would appeal to him makes him think that it must appeal to the whole State—which is an insult to Georgia.

That the State of Georgia possesses in its own composite mind the perspective, sensibilities and personal lines of desire and deduction peculiar to its senior Senator the State itself is rather horrifically loth to believe.

Of course, the senior Senator sees now he has made a horrible political mistake, and it must be driving him close to the verge of insomnia when he contemplates the obtaining sentiment back home—but he has played the cotton string too heavily and too long to close haul now and take another tack. Too many people are watching; it would be too palpable. His only hope is to pull and drive some sort of concession—the color of a concession would do—so that he might come back to the people of Jawjaw, for whom his gymnastic and mercurial ventricular apparatus burns with such lambent and steady flame—he admits that—to tell "his people" how glad he is to get back among them to the surcease they bring him from the monumental and absorbing cares of international statecraft, and of how he has not alone brought the mighty British empire whimpering to its knees before his righteousness awfulness, but the erring national administration as well.

Cotton has made a fool of Hoke Smith the last two years—spectacularly, even picturesquely so. He smarts under it. As its vagaries have betrayed him, so he sought to rehabilitate himself by making one more bold plunge into its possibilities. He has failed.

He now flounders and rails against England, and indirectly against the President of the United States—the man who has done so much for him and upon whom he has now turned with characteristic Hokesmithism—and seeks to hamper the Secretary of State in their foreign policy. But one comfort, one balm is his, and that is in the German Gilead. His now are the plaudits of The Fatherland, his was the adoration of Fowler, the Congressman now held under indictment for what constitutes actual treason to the United States. His old upholders, his old strokers and flatterers are shamed and silent. Not even the Atlanta Journal can say one word for him.

And the Georgia farmer, to whom he is most strenuously appealing, turns his face, for he has learned in the past that Hoke Smith trying to help cotton is about the worst prospect cotton has had to face. It has survived in spite of his aid. We have hopes that it still will.

Hoke Smith's Lapse.

[Knoxville (Tenn.) Sentinel.]

If the cotton farmers are up in arms because they are only getting 12 cents and a little more for their cotton, Senator Smith may thank his stars that there is no likelihood of Congress adopting the embargo against England and her allies that he is asking for. The slump that hit cotton on the outbreak of the war would be nothing compared with the blight that would descend upon it if Senator Smith's advice was followed. We venture to say that not only would the cotton rot unpicked in the fields because it would not pay for the picking, but a universal pall of com-

mercial and industrial disaster would take the place of our present astounding and unprecedented volume of foreign and domestic commerce and dispel the all-pervading sunshine of prosperity that at this moment penetrates every nook and corner of our country, such as befell the United States in an identically similar situation under President Jefferson, who in an ill-advised, unfortunate hour laid an embargo on American shipping and commerce because practically the same belligerents as now, with some change of partners, were committing depredations upon our shipping and commerce. Mr. Jefferson scuttled our rich argosies because pirates menaced them, and he never ceased to grieve at the results of this one monumental blunder of an otherwise exceptionally brilliant and successful administration.

It is not possible that with this lesson of the past before it Congress will think of repeating Mr. Jefferson's blunder.

Hoke Smith Rampant.

[Asheville (N. C.) Citizen.]

By his series of outbursts in the upper chamber of Congress Senator Hoke Smith seeks to keep alive his agitation in behalf of his soul's idol—cotton. Hoke Smith is nothing if not spectacular, and his oft-professed love of the South is only equaled by his love of the limelight. His plan to "boost" the price of cotton by an embargo on all American commerce to the allied nations, virtually an end to all American exports, Hoke Smith's regard for the South and for Southern interests is no greater, however, than that of Senator John Sharp Williams, who replied in magnificent style to the Georgian's tirade in the Senate chamber the other night. It appears that Hoke Smith is perfectly willing to overlook the slaughter of American citizens on the high seas by means of German and Austrian submarines, but the seizure of a bale of cotton is something more than the Georgian Senator can stand. Accepting this as Senator Smith's unalterable attitude, the Mississippi Senator replied in effect that an American life is worth more than a bale of cotton. "I do not want to see Dixie," said Senator Williams, "put in the attitude of caring as much about cotton as it does about American life; as much about cotton as about women and children sent unknobbed and unshaven to their graves in the high seas, not upon foreign soil, but upon the free high seas, unwept, unsung and unwarmed." As between the expressed sentiments of the two men we would say that the utterances of Senator Williams reflect the true attitude of the Southern people whose god is not cotton.

Like many others have done before him, Hoke Smith of Georgia seeks to make himself the exponent of Southern ideals, but his utterances, while temporarily embarrassing to the people involved, are taken with a grain of salt by Americans generally. It was the Smith type which placed the South in the role of a mendicant when the "buy-a-bale" movement was born, a piece of folly which did the South incalculable harm and sorely impaired its credit. It is not statesmanship, but vanity, which prompts the Smith school to "bleed" periodically for a section of the United States which has suffered more at the hands of its own than from the attacks of its bitterest enemies.

Wanted—A Silencer for Hoke Smith.

[Tampa (Fla.) Times.]

One of the nation's greatest needs for months past has been for a sound-silencing attachment to the vocal organs of Hoke Smith, United States Senator from Georgia, who was born or has developed into a "disease

of words." In fact, Mr. Smith is the South's most vociferous demagogue or we are badly mistaken. If we are mistaken, we will be overwhelmed with joy if someone will show us the error of our utterances.

If we mistake not, Mr. Smith was the first "statesman" to reflect upon the South by frantically yelling for Government aid in the handling of the cotton crop, also for the "buy-a-bale" movement, in which our section was placed in the light of a half-starved mendicant. Smith's ravings led many people to believe that Southerners would be chased to almshouses because of the outbreak of the war, and he and others received a well-merited "call-down" from leading Southern publications.

For weeks past Smith has been annoying President Wilson by his yowps against Great Britain on the blockade question, and, as usual, has displayed ignorance in his gallery-playing, at which he is indeed an adept. With our small army and lack of defenses generally, he would have us embroiled in the present useless war, with no good possible and incalculable damage certain. In other words, his voice is like unto the braying of an ass in so far as the production of good is concerned, and at the same time as dangerous as the hind feet of the same long-eared animal.

Growing weary of Smith's chatter, John Sharp Williams of Mississippi, the South's most brilliant Senator, rose in his seat the other day and gave him a verbal walloping that should "hold him for a while." Such a dream may not be realized, but the American people have at least been informed by Mr. Williams that Southerners do not sanction demagogic or beggarly pleas for aid in the present world crisis. On this subject the Mobile Item voices our sentiments by saying:

"The press of the country, regardless of party affiliation, is complimenting United States Senator John Sharp Williams of Mississippi, on his manly address on the floor of the Senate in answer to Senator Hoke Smith of Georgia. The New York Commercial says: 'Every American can thank his stars that John Sharp Williams sits in the United States Senate today to tear away the veil behind which Senator Hoke Smith tries to hide the motives that inspire him, about which the truth has not been told in the Senate chamber. Senator Williams told the naked truth when he laid the blame for British infringement of our neutral rights on the precedents we created during the Civil War. He also reminded us of the futility of challenging the allies to mortal combat with our scattered little army of less than 90,000 men and enough ammunition for our coast defense guns to last three-quarters of an hour.'"

What an Embargo Leads To.

[Mobile (Ala.) Register.]

Suppose for a moment that the embargo desired by the Senator from Georgia could be declared by a crazy Congress, what would the real effect be upon cotton as a marketable product? As Senator Williams said in his vigorous retort, these Allies against whom the embargo would be laid give American cotton its present high price. It is worth over 12 cents a pound in the Memphis market, and but for the war the price would not be over 10 cents. Ordinarily Great Britain, France and Italy and their dependencies take 73 per cent. of our exports of cotton, and are taking fully that now. In fact, by supplying neutral countries from what they get, or helping them to it in other ways, they supply the market for a much higher percentage. If there could be an embargo—and it is certain that those powers would not yield on the blockade to prevent it—what would be the effect upon trade in cotton and the prices of that commodity in the world's market? The Mississippi Senator said: "Cut off the British, French and Italian markets and their dependencies and cotton

would not be worth four cents week after next."—New York Journal of Commerce.

One would almost be glad to see the embargo tried in order to have the inevitable demonstration of its disastrous effect upon the reputation of the advocates of embargo. With cotton down to four cents and every business in the South flat on its back, we should find our people pitying themselves, and not the Germans, as Senator Smith now wishes them to do; and they would have good ground for pity. Also, there would be immense feeling against those who placed them in such deplorable situation.

When the last embargo was on, all New England was up in arms. "It is better to suffer the amputation of a limb than to lose the whole body," said the Boston Gazette, advocating secession. Another voice said: "Nerve your arms against the despot (Jefferson)." The Augusta (Me.) resolutions read: "Silence would be a crime and resistance would become a virtue of the first magnitude."

Of course, there will be no repetition of the embargo. We are fortunate in having a man of common sense at the head of affairs. It is worth saying, however, that the advocates of embargo are ignorant of their country's history if they do not know that what they propose would be a sowing of the wind and the reaping of the whirlwind.

Virulent Disturber of United States Senate.

[Chattanooga (Tenn.) Times.]

The Norfolk Virginian-Pilot hands this solar plexus blow at one of the virulent disturbers in the United States Senate: "It does not seem to have occurred to the Hon. Hocus Pocus Smith that he could be better employed seeking to curb the spirit of lawlessness among his constituents down in Georgia than in ranting about the 'lawlessness' of Great Britain on the high seas." Sure; but then Great Britain doesn't vote in Georgia, which is quite different with the Smith brand of statesmen.

Should Get Busy at Home.

[Memphis (Tenn.) Commercial-Appeal.]

If Hoke Smith would stop trying to twist the tail of the English lion and devote his time to untwisting the lynching rope that has tied up Georgia's best traditions, he might accomplish some real good.

Talks Like a Man Willing for War to Come.

[Hot Springs (Ark.) Sentinel-Record.]

Hoke Smith says he doesn't want this country to go to war, but he talks very much like a man who was willing to bring war to this country.

Contract Let for \$1,000,000 Building.

The Public Service Building Co. of Baltimore has let contract to J. Henry Miller, Inc., Baltimore, for the erection of its proposed 20-story office building at Lexington and Liberty streets, recently described in MANUFACTURERS RECORD. This structure will be 120x84 feet, fireproof, with exterior of granite and terra-cotta. It will be equipped with nine high-speed elevators, forced feed ventilating and steam heating system, vacuum cleaning system, fire pumps, refrigerating plant and metal window frames and doors. Plans for the building were prepared by Parker, Thomas & Rice of Baltimore, and its cost is estimated at \$1,000,000.

Potash From Cement Rock.

The manufacture of potash from cement rock is contemplated by the Security Cement & Lime Co., Security, Md., which recently wired the MANUFACTURERS RECORD it was investigating methods of recovering potash from raw materials used in manufacturing its Portland cement and lime. A demonstration plant is now proposed, and if the experiments are satisfactory, the first unit of a permanent plant may be established at a cost of \$50,000.

How Sugar Will Be Saved from the Free List

TARIFF SCHEDULES WILL NOT BE CONSIDERED BY THIS CONGRESS—PROPOSED PLANS FOR RAISING REVENUE—THE BRANDEIS APPOINTMENT DISCUSSED

[Special Correspondence Manufacturers Record.]

Washington, D. C., February 1.

The plan to save sugar from the free list will probably be carried out by means of a resolution introduced in the House authorizing the President to suspend operations of the provisions of the tariff bill in so far as it relates to putting sugar on the free list March 1, 1916. The disposition of the House and Senate seems to be favorable to this course. The administration is hard pressed for ways and means of raising revenues, and it "needs the money" to be derived from the sugar tariff. At the same time this Congress is resolutely opposed to a general discussion of tariff schedules. Handling the sugar situation by means of the resolution proposed is the plan hit upon by Congress to sidestep the whole tariff discussion.

The raising of revenues is the most serious subject in the minds of the administration at this time. The extent of preparedness depends on the revenues. Committees of Congress are making investigations as to the needs of this country, and some surprising revelations have been brought out by the testimony of generals and admirals who have appeared before these committees. At the same time, as usual, Congress is aiming to reach conclusions which will stand up with the people "back home." Congressmen and Senators are being asked by their constituents to state a definite purpose as to what is going to be done with the sum of money mentioned as necessary to secure adequate national preparedness.

One way of raising money which has been favored by some Congressmen is by a tax on munitions exported. The advocates of this plan point to the impression that has gone forth that New York is simply wallowing in the profits of "war brides," and it is obviously a popular proposition at this time to skim off some of the cream that has risen to the surface in the money centers of the East.

Because the administration is so put to it to raise revenues even for ordinary expenditures of running the Government, and because devices other than through tariff revision are determined upon, the improvement of the rivers and harbors of the country, even including such improvements as are of immediate and self-evident usefulness, are likely to be again put over to another Congress. For a time it seemed that the Rivers and Harbors Committee of the House would bring in a bill calling for appropriations for a number of projects so meritorious that only the most bigoted opponents of river and harbor improvements could find excuse for opposing them. It now appears that no new work of any kind will be recommended or undertaken.

The fate of the Good Roads bill is likely to be determined by the same consideration. There is, however, a recognized necessity for the improvement of postroads for possible military uses, and as a part of the defense and preparedness program it may turn out that some consideration and co-operation will be given by the Government at an early day to secure the betterment of the postroads of the country.

Nothing that has occurred in recent days has caused such a gasp of astonishment as the nomination by President Wilson of Louis D. Brandeis for the position on the United States Supreme Bench made vacant by the death of Justice Lamar. Even members of the Cabinet were not generally informed of the intended appointment. In some quarters the influence of Secretary McAdoo is suggested as having been influential, as Brandeis and McAdoo have been on terms of business and friendly relationship for some time.

It seems probable, however, that the appointment will be confirmed. That it is a political appointment is too obvious for discussion by anyone. Whether as such it is a shrewd political move or not remains to be seen. Whether it will influence the Hebrew vote, the labor union and the socialist vote to the extent of

making Brandeis a net political asset to the Wilson cause may be the subject of some speculation.

There is a very distinct impression in Washington that Justice Hughes will be tendered the nomination for President at the Republican-Progressive convention in Chicago in June. There has been a considerable degree of feeling against the selection of Mr. Hughes on the ground that it would be an assault on the dignity of the Supreme Court. One of the comments I heard on the Brandeis appointment was to the effect that no such consideration need stand in the way of Mr. Hughes' selection now, for by the nomination of Brandeis the proposed assault on the dignity of the Supreme Court by the Chicago convention would seem trivial by comparison.

\$3,000,000 for Tinplate Mill.

Through the efforts of J. E. Aldred of New York, chairman of the Consolidated Gas, Electric Light & Power Co. of Baltimore, another important manufacturing enterprise will be located on the water front at Baltimore. This will be a tinplate mill, and a \$3,000,000 corporation. The Baltimore Sheet & Tinplate Co. will be organized to build the plant. Mr. Aldred and Baltimore and New York capitalists will furnish the capital, and J. M. Jones, vice-president and general manager of the Massillon (Ohio) Rolling Mill Co., who will also be financially interested, will be the managing official of the new organization. The mill as planned will employ about 600 men, and its product will be sold to manufacturers of tin containers, bottle caps and stoppers, decorated tin boxes, advertising signs, kitchenware, etc. Large quantities of tinplate are purchased annually by Baltimore manufacturers using this material, conservative estimates being that \$10,500,000 worth is consumed each year. Plans and specifications are being prepared for the mill, including provision for the electric drive.

Virginia and Tennessee Zinc Development.

A 1175-acre zinc property in Sullivan county, Tennessee, and Scott county, Virginia, will be developed by the Southern Zinc & Mining Co. of New York. Air compressors, drills, pumps, wet concentrating equipment, etc., will be installed for a large capacity, J. H. Banks of New York being the mining engineer in charge. The equipment will be wanted in about 30 days. This company was lately reported as having purchased Virginia and Tennessee zinc lands.

To Make Fiber Box Machinery.

Machinery for manufacturing fiber boxes will be made by the Strong Box Co. of America, which has been incorporated with a capitalization of \$600,000. The machinery will be leased to box manufacturers. Officers of the company are: J. W. Weiss, president; J. M. Raffel, vice-president and treasurer, both of the J. M. Raffel Company, Baltimore, where the new plant is to be located.

Sawmill to Cost \$750,000.

Approximately \$750,000 will be invested by the Lutcher & Moore Lumber Co. for its sawmill planned at Orange, Tex. This mill will have a 10-hour capacity of 200,000 feet of lumber, and its equipment will include an electrically operated monorail system with daily capacity of 400,000 feet. Thrall & Shea, Lake Charles, La., are the designers and millwrights, and the Filer & Stowell Company of Milwaukee have the contract for machinery and materials.

News and Views from Our Readers

Suggests That New York Bankers Should Loan Money to the South Instead of to Mexico.

B. H. WILSON, New Smyrna, Fla.

In the December 23, 1915, issue of MANUFACTURERS RECORD appears an article from your New York correspondent stating that a syndicate of New York bankers had practically agreed to loan \$50,000,000 to the Carranza Government in Mexico for the rehabilitation of Mexican industry.

In the absence of information as to how this proposed loan is to be finally worked out and consummated, I am led to ask whether these bankers expect to loan their own money to Carranza, or whether the small investor will be "let in on the ground floor" and invited through full-page advertisements in leading periodicals to loan their small savings to a Mexican chieftain who just now seems to have the upper hand in Mexican affairs, but who can give no valid guarantee that neither himself nor his successor will take personal possession of this \$41,000,000 gold reserve and "flee to some secluded spot."

If these bankers wish to loan their own money to Carranza they have a perfect right to do so. They also have a right to broker such a loan and to receive a commission for their services. But I do not believe that the small investor, who in many cases relies solely upon the reputation of his banker or broker for security, should be induced to invest his savings in foreign securities of doubtful merit by advertisements of well-known bankers and brokers whose financial and business standing alone would be accepted by many inexperienced investors as sufficient evidence of the value of their offerings.

If these New York bankers and brokers have \$50,000,000 at their disposal seeking investment, their attention should be called to the fact that the development of agriculture in our own Southern States offers opportunities for safe and profitable investment far surpassing those of any foreign country. In the South there are millions of acres of fertile lands yet untouched by the plow, while throughout the country there are many thousands of honest, industrious land-hungry men who are longing for an opportunity to own and till a farm in the South. Many of these men own tracts of good unimproved land, but do not have money enough to make necessary improvements. Many others own farms only partly developed.

It seems to me that a fund of \$50,000,000, or even \$100,000,000, could be quickly, safely and profitably loaned in such a way that it would all be spent for the permanent improvement of these now unimproved Southern lands, and that these lands, with the improvements, would be far more stable security than the bonds of any war-torn foreign countries.

Lending \$50,000,000 in average amounts of \$500 to each farmer who owned his land clear of debt and who would spend the amount borrowed and an equal amount of his own money for permanent improvements, would mean the prompt settlement upon and improvement of 100,000 new farms in the South; 100,000 men taken from the congested cities and towns and placed upon farms where they can produce more than they consume; more work and prosperity for those remaining in the cities, and a more prosperous nation.

It is a well-known fact that in the South interest rates range from 8 per cent. upward, and that it is now practically impossible to borrow money even at high rates with which to improve raw land, it matters not how fertile or well located. The owner of a well-improved farm can sometimes borrow a few hundred dollars on it at 8 or 10 per cent., plus brokerage or commission.

A large sum could be quickly and profitably loaned to men who own raw lands in the South and who would supplement the amount borrowed by a sufficient amount of their own money or labor to make a security far better than can be given by any foreign country. Money loaned for the promotion of agriculture in the South would be spent for building material "made in America" and for labor among our own people. The interest and principal could be amply secured and

promptly collected without danger of international complications.

In these days of wars and rumors of wars, it is well that we should give due heed to our sources of ore supply and to the proper location of our munition factories. But should the ravages and horrors of war ever again be thrust upon us, the success of our arms will be due as much to the quantity, quality and accessibility of the products of our farms as upon our munitions.

The greater portion of our meat and bread now comes from the country tributary to Chicago, St. Louis, Kansas City and Omaha. Should our nation be invaded from the north it is quite within the range of possibility that the invading army will first capture the Lake Superior ore district, then as much as possible of the rich corn, wheat and cattle country lying immediately south of Lake Superior, thus striking a deadly blow at both our munitions and our food supply.

The South can and does raise corn, wheat, cattle and hogs, as well as other farm product, but in quantities far below its potential capacity.

If the South could borrow money at a reasonable rate of interest with which to improve its fertile and now idle lands, it would soon become a still greater factor in our nation's prosperity in time of peace and defense in time of war.

A given sum spent for the establishment of farmers upon the fertile unimproved lands of the South would do more to promote the happiness, peace and prosperity of our nation than the lending of twice the amount to any foreign country.

[That there is great need for money to develop unoccupied land in the South, and great need for money to improve land already under cultivation, goes without saying. The problem is big enough to enlist the energy and the capital of the greatest financiers of the country, but there are many angles to it. Bankers and brokers can only act as middlemen to distribute securities to investors, and unless farm loans can be made safe and payment at maturity assured, the general investor will not take them from the middlemen. A loan of \$500 to \$1000 will often need as much legal investigation on the part of the lender as a loan of \$1,000,000, and the cost is too great for the profit of the interest. This and many other questions must be solved before Mr. Wilson's idea can be made fully effective.—Ed. MANUFACTURERS RECORD.]

Winston-Salem or Louisville. Around Durham is grown the tobacco and in Durham is made several of the most celebrated brands of cigarettes and smoking tobaccos. However, doubtless Rochester or Harrisburg, Pa., enlightened these distinguished visitors on the tobacco industry of the United States.

As to Louisiana's syrup and sugar, I am assuming the gentlemen found much interesting data in the packing-house districts of Chicago. They doubtless gained a splendid knowledge of the great pig-iron, steel, coal and coke industry around Birmingham by jockeying with the business men of Cleveland, O. They are to be felicitated on the data they collected about our naval stores supply from Georgia, Alabama, Mississippi and Florida, and of the phosphate industry in Tennessee and Florida furnished them by the grain and livestock export men of St. Louis.

Modestly I would suggest that when European trade commissions visit this country the Bureau of Foreign and Domestic Commerce at Washington map out an itinerary that will be in keeping, somewhat, with the order of things.

Doing Great Work for Homeless Boys.

C. C. THURBER, Superintendent, the Industrial School and Farm for Homeless Boys, Covington, Va.

Our home here is the only institution of exactly the same nature anywhere in the South. This is the only open door for a delinquent, homeless and friendless outcast boy save the poor farm or the reformatory. We are endeavoring to secure a building fund of \$100,000 to provide a home for 400 boys. Our industrial building containing a printing plant, with room for a manual training shop, has been completed. We have funds in hand or pledged for four cottages to care for 20 boys each. Our plans call for an administration building, a school building, a chapel, a dining-room and other necessary buildings of less importance. We now have in our home 62 boys, received regardless of creed, nationality or place of residence. Many are boys from the mountains, and others from the juvenile courts of our cities, who have all been saved from lives of misery, sin and ignorance. Our work is dependent upon voluntary contributions, although a large number of boys are provided for by scholarships given by generous and interested persons in Virginia and other States.

The South Was Left Out.

F. M. RUNNELS, Secretary Durham Chamber of Commerce, Durham, N. C.

Early in December we addressed a communication to the Bureau of Foreign and Domestic Commerce, Washington, asking to be put in touch with the officials of the American Export Chamber of Commerce of Amsterdam, advising that the Durham Chamber of Commerce wished to extend an invitation to the party to visit this city and study the tobacco plant, from the farm production to the manufactured product. The assistant chief of the bureau very courteously gave prompt attention to our request and attached a mimeograph sheet saying that the delegates to the United States had in mind a co-operative plan for the establishment of a commercial museum in Amsterdam, and were visiting the industrial centers in this country for the purpose of discussing the prospects for the sale of our goods in European countries.

In looking over the list of places to be visited, I was very much surprised to find that only one Southern city was included, that being Baltimore, very much on the rim of the line that theoretically divides Northern and Southern centers. The places where these gentlemen expect to find American manufacturers and producers best represented are New York City, Rochester, Buffalo, Chicago, St. Louis, Cincinnati, Cleveland, Pittsburgh, Harrisburg and Philadelphia.

I am interested to know how this commission of studious Europeans made a study of the tobacco industry in any of the cities named. Certainly not at the seat of the industry, either Durham, Richmond,

Yellow Pine Men Want a Practical Demonstration.

PHILIP S. GARDNER, Secretary Eastman, Gardner & Co., Laurel, Miss.

I have read with great interest the article by Dr. Little in the January 20 issue of the MANUFACTURERS RECORD.

The yellow pine mill men would be more impressed with the article if it had been written by some man who had actually made some money in a by-product plant, using yellow-pine refuse. We are familiar with the operations of a number of these plants that have been started in the South, but we have not yet heard of any that have made money for the stockholders. There is not the slightest doubt that the by-products he mentions can be produced, and we are in hopes that the time will soon come when they can be produced at a profit.

I cannot quite agree with Dr. Little's concluding remark in regard to the blindness of yellow pine mill men. On the contrary, we consider them to be a pretty wide-awake set of business men, who are very much on the alert in regard to any additional product or utilization of material now going to waste. Some progress is being made in the utilization of yellow-pine refuse for making paper. There is a plant of this character near here, but the investment is something over \$800,000, and we understand that so far no money has been made in the venture. We ourselves are stockholders in a plant right here in town which is producing turpentine, rosin and various pine oils from yellow-pine waste. Unfortunately, this plant had to be closed for a couple

of years.
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of years on account of the low price of rosin, but recently it has again started up, and we are in hopes that it will be operated at profit. This however, remains to be proved.

The expense of experimenting with the manufacture of by-products is so great that very few yellow-pine manufacturers feel able to go into the matter deeply enough to get at the real facts of the cost of operation under practical working conditions. The Southern Pine Association is trying to get Congress to appropriate money enough to establish a by-product plant somewhere in the South adjacent to large supplies of raw material. Mr. W. H. Sullivan, general manager Great Southern Lumber Co., Bogalusa, La., has been instrumental in pushing this project, and we are hoping that something will come of it. It certainly seems that the Government, with its unlimited resources, should bear the expense of these experiments, rather than any single corporation, for the reason that when a practical process is worked out it can be applied to the whole lumber-producing field of the country, and is therefore national in its aspect.

The Southern Pine Association will hold its annual meeting in New Orleans on February 22-23 at the Grunewald Hotel, and if Dr. Little can show the yellow-pine people where they can make some money from material now going to waste you may be assured that he will be given a ready hearing; but I might venture to hint that he must have something more convincing to offer than appears in the article in your paper. So much money has been lost by yellow-pine lumbermen in experiments along these lines that they do not feel like investing any further large sums of money until it can be clearly pointed out that such an investment will be profitable.

Wants Location for Manufacture of Tropical Clothing.

WARREN E. SMITH, South Norwalk, Conn.

My business is the manufacturing of men's tropical clothing; that is, high-class washable suits for men's wear, such as are used largely in the South. I am looking for capital and location to do that kind of business on a large scale. It is a clean, profitable industry that ought to interest any Southern city. The only machinery necessary, of course, is sewing machines, and there is no necessity for building; quarters can be rented.

Busy Bluefield.

W. L. SHAFFER, Secretary Bluefield Chamber of Commerce, Bluefield, W. Va.

The Bluefield Chamber of Commerce, which includes Bluefield, W. Va.; Graham, Va., and the Pocahontas coal region, has outlined an extensive program of work for 1916, in addition to day-by-day activities, largely along civic lines and including the following, which are the result of a study of the city's needs and of suggestions offered by members and citizens:

A cleaner city—streets, alleys and premises; better garbage collection and disposal, better fire protection and prevention, a new passenger station, a city-owned cemetery, free medical attention for poor school children, work on the problem of road maintenance, and an improved sign system.

That these and current matters are certain to have active attention may be foreseen from successful work in 1915, approximately one hundred things done for Bluefield in the year. There were very few of these in which the Bluefield Chamber's activity and influence were not manifested. Some of the 1915 doings are:

Along industrial lines the Chamber aided in securing and establishing an enlarged furniture factory, creamy-products plant, cold-storage warehouse, wagon works, bakery, repair shops and two sand crushers, and made a survey of manufacturing and wholesaling, which showed a growth of 93 per cent. in annual business over 1910. Commercially the Chamber conducted "Fall Opening" and "Buy in Busy Bluefield" advertising campaigns, resulting in larger trade zone; inaugurated a new credit reporting and rating system, protected merchants against fake or inefficient advertising schemes, and investigated transient merchant regulations in other cities for a new ordinance for Bluefield.

Civic activities included a \$50,000 graded school for the new South Bluefield residential district, a commercial course in the high school, a public playground, the Bluefield-Graham fair, additional street-car service, and chlorine filters in the water mains. Community work was along extensive lines, including an additional bond issue of \$350,000 for county roads (making a total of \$500,000), establishment of county agricultural agency, aiding in construction of 12-mile interurban line between Bluefield and Princeton, and encouraging more trucking for Bluefield and coal field markets. A score of conventions were cared for, several were secured for 1916 and 1917, active general publicity was given and the trade campaigns noted above were conducted, showing life along publicity lines. There were 11 board meetings during 1915, nine membership meetings and about 100 committee meetings.

Backing the active membership in this work are the following officers, re-elected for 1916 (with exception of the treasurer, who was formerly a director): President, Fred W. Udy; vice-president, R. B. Williamson; treasurer, George Dunglinson, Jr.; secretary, W. L. Shafer.

Approves Editorials and Profits by Business Information.

E. L. FLOWERS, President and General Manager, Home Canner Manufacturing Co., Hickory, N. C.

We are enclosing a check covering subscription to the MANUFACTURERS RECORD.

The writer has for a number of years been a reader of your paper, and always appreciates the editorials and has found the contents of the paper generally to be very helpful.

We gain a great deal of business by looking through the various columns with reference to addresses of firms who are in our line, and also find the advertisements to be interesting and useful.

The writer heartily agrees with yours of the 20th in reply to the coarse letter written by Jas. F. Carter. If the United States had a few more such men as that at the heads of the departments of the Government and industry, this country would be a home of barbarians, to say the least.

Will Develop Mexican Minerals.

WM. H. ROGERS, Paint Mills, Houston, Tex.

I am going to develop ochres, umbers, chalk, barytes, asbestos and graphite in Mexico this spring, and will be in the market for machinery for crushing and grinding same in the dry form only. Second-hand machinery will do as well as new if guaranteed to do the work.

Progress of Baton Rouge in 1915.

G. A. WATERMAN, General Secretary Baton Rouge Chamber of Commerce, Baton Rouge, La.

Baton Rouge is rather proud of its comparative figures for December 31, 1914 and 1915. They show solidity of business conditions and indicate not only increase in prosperity, but a good distribution of prosperity.

Dealing in round figures only, banking statistics show an increase in resources from \$4,002,000 to \$4,602,300, or 15.5 per cent. Aggregate deposits show an increase from \$2,702,000 to \$3,402,000, or 25.9 per cent.

The bank figures reflect the expansion of the Standard Oil Co. and also an extensive payroll based on a 10-mile paving contract now in course of execution within the city limits. These two special payrolls have contributed materially to the prosperity of the community, and the bankers agree that the character and number of individual accounts with them indicate that this prosperity is distributed.

Building permits for 1915 show 58.5 per cent. greater than the aggregate for 1914, while the new construction work alone last year was 47.6 per cent. in excess of the combined construction and repairs of the preceding year. The detailed figures for last year show \$333,520 for construction and \$24,567 for repairs.

The building figures do not include any of the costly

extensions of the Standard Oil plant outside of the city. They do include the new Stone & Webster power plant, but do not include the nearly \$200,000 equipment and furnishings of the plant. The building figures include also several strictly modern reinforced concrete buildings in the business section and the new Peabody Building at the State University.

The more pronounced civic improvements include the City Abattoir at a cost of \$22,000 and the white way on boulevard; also the institution and equipment of a playground by the Fraternal Order of Eagles.

The postoffice stamp receipts were 17 per cent. in excess of 1914.

The Cumberland Telephone Co. reports a 17 per cent. increase in the number of telephones in use, without any solicitation whatever for new business. Eliminating the telephones placed in one of the hotels, the increase would be 10 per cent.

Stone & Webster interests, who control the gas and electric business here, report 9 per cent. increase in the number of homes using gas, which is used here only for cooking and heating, and a 7 per cent. increase in the number of electricity customers. The aggregate horsepower of electric-power motors shows an increase of 21.5 per cent.

Uniform Boiler Law Plans Expanded.

A recent statement by Thomas E. Durban, chairman administrative council of the American Uniform Boiler Law Society, outlines the progress that is being made looking to the legal adoption by various States of the Uniform Boiler Code recommended by the American Society of Mechanical Engineers.

A meeting was recently held with the Industrial Board of Indiana to discuss a conflict at several points between the A. S. M. E. Code and the Indiana law, and as a result of this conference it is expected that no difficulty will be encountered in amending the Indiana law at the next meeting of the Legislature to cover the Uniform Code in its entirety.

It is also stated that a campaign for the adoption of the code has been opened in Georgia, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New York, Rhode Island, South Carolina, Virginia. Letters have been addressed to proper people in all of the States soliciting assistance, and many promises of co-operation have been received. A letter has also been sent to all members of the American Society of Mechanical Engineers in all States of the Union, and a large number of replies have come from many prominent people tendering their support.

The code has been made a textbook in Stevens Institute of Hoboken, and the question of making it a textbook is under consideration in several other large technical schools, prominent among which is the Sheffield Scientific School of Yale University.

The efforts of the American Uniform Boiler Law Society are deservedly meeting with marked success, and it is hoped before long to have the code adopted by every State in the Union, so that all of those interested in every phase of designing and building boilers and installing them will have a uniform law that will enable boilers to be built and installed to the complete satisfaction of all parties.

Georgia Manufacturers to Meet.

The first annual meeting of the Georgia Manufacturers' Association will be held in Atlanta on February 10. In order to create the greatest interest in the work of the association it was decided to throw the meeting open to all manufacturers of the State whether members of the association or not.

The objects of the association are to look after all interests pertaining to manufacturing in the State; to co-operate in its widest possible industrial development; to secure the enactment of beneficial laws and oppose those that would tend to hinder development; to secure proper comparative freight rates and classifications; to extend the market for Georgia manufactured products, and to keep prominently before the public the importance of industrial development to the general prosperity of the State.

The details of the convention are in charge of Wm. W. Horne, secretary, Chamber of Commerce Building, Atlanta, Ga.

COTTON-PICKING MACHINE MAKES HIGH AVERAGE IN SOUTH CAROLINA.

J. B. Neil of York, S. C., the inventor of a cotton picker being promoted by the South Carolina Cotton Picker Co. of York, writes the MANUFACTURERS RECORD that the machine he has been working on for several years has been brought to a point of practicability, rendering it available for commercial manufacture.

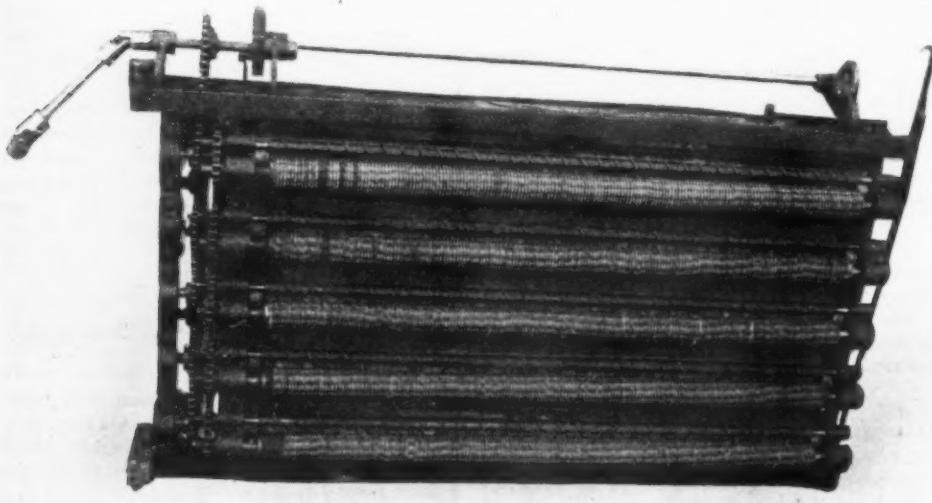
An accompanying illustration shows the machine

designed to catch nothing but the ripe fiber; leaves, stems and green balls being passed over without damage. They are set in a frame, so that one chain drives all the rollers of each unit. In operation the rollers have a revolving and oscillating movement, giving the bolls a rolling motion against the picker rollers, facilitating the picking of ripe fiber and causing other parts

100 pounds a day by the average hand picker. According to that the picker machine does the work of 42 hand pickers.

The importance of such a performance need not be dwelt upon. To anyone at all familiar with the difficulty of getting cotton picked rapidly when thoroughly ripe, and the cost of the labor of the operation, the immense advantage of a machine that would do such work is obvious. If this machine in service stands up to any such record, or one near it, and develops no serious faults, it will prove a revolutionary invention.

The South Carolina Cotton Picker Co. plans to build the picker in two models, one horse drawn, to sell for about \$350, the other to run on its own power and to sell for about \$600.

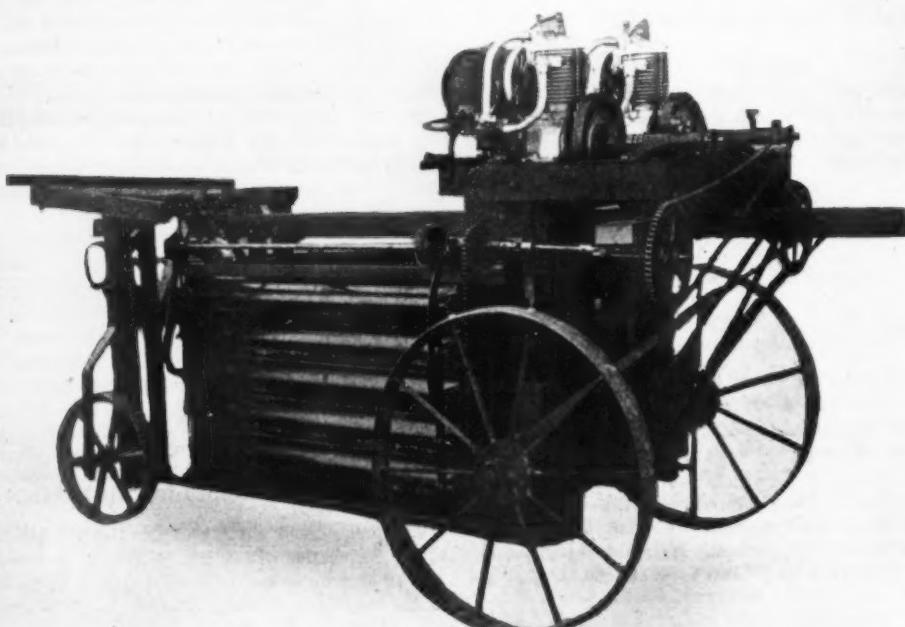


INNER SIDE OF PICKER UNIT.

complete except for the conveyor and receiving sack and the deflector, a semi-funnel-shaped sheet-iron device attached in front below the motor to guide the plants between the pickers, left off in photographing to give a better view of the mechanical construction. The ma-

chine runs astride the row, carrying on each side a picking unit as shown herewith. These are set wide apart in front, with space between narrowing toward the rear, where just enough space is left to allow room for the plants. They are set at a 25-degree elevation toward the front, so that the entire area will be effective picking surface.

In the field the machine is said to have picked an



SOUTH CAROLINA COTTON PICKER, DEFLECTOR UNDER MOTORS IN FRONT, AND CONVEYOR REMOVED.

chine runs astride the row, carrying on each side a picking unit as shown herewith. These are set wide apart in front, with space between narrowing toward the rear, where just enough space is left to allow room for the plants. They are set at a 25-degree elevation toward the front, so that the entire area will be effective picking surface.

Each of these units carries five rollers, with surfaces

average of 74.66 per cent. of cotton on one time over, going as high as 82 per cent. For twice over the row it averaged 87.5 per cent. The amount of foreign matter gathered with the cotton is said to be very small. A speed of 150 feet a minute is maintained in operation. As high as seven pounds a minute, which is 4200 pounds for a 10-hour working day, is said to have been picked, which is a startling figure when compared with the

Southern Industrial Activities.

During January of this year the Construction Department of the MANUFACTURERS RECORD has published 3935 items regarding industrial developments, financial, railroad and building operations, and general business interests in the South and Southwest. These have been shown daily in the Daily Bulletin and weekly in the MANUFACTURERS RECORD, and are summarized in the following table:

Industrial and Developmental.

Bridges, Culverts, Viaducts.....	22
Canning and Packing Plants.....	3
Clayworking Plants.....	1
Coal Mines and Coke Ovens.....	22
Concrete and Cement Plants.....	1
Cotton Compresses and Gins.....	10
Cottonseed-oil Mills.....	1
Drainage Systems.....	4
Electric Plants.....	12
Fertilizer Factories.....	1
Flour, Feed and Meal Mills.....	2
Foundry and Machine Plants.....	1
Gas and Oil Enterprises.....	20
Hydro-Electric Plants.....	10
Ice and Cold-storage Plants.....	1
Iron and Steel Plants.....	15
Irrigation Systems.....	1
Land Developments.....	4
Lumber Manufacturing.....	21
Metal-working Plants.....	1
Mining	6
Miscellaneous Construction.....	26
Miscellaneous Enterprises.....	2
Miscellaneous Factories.....	21
Motors and Garages.....	1
Railway Shops, Terminals, Roundhouses, etc.....	1
Road and Street Work.....	12
Sewer Construction.....	1
Telephone Systems.....	1
Textile Mills.....	1
Water-works	1
Woodworking Plants.....	1

Buildings.

Apartment-houses	1
Association and Fraternal.....	1
Bank and Office.....	1
Churches	1
City and County.....	1
Courthouses	1
Dwellings	22
Government and State.....	11
Hospitals, Sanitariums, etc.....	1
Hotels	1
Miscellaneous.....	1
Railway Stations, Sheds, etc.....	1
Schools	16
Stores	13
Theaters	1
Warehouses	1

Railroad Construction.

Railways	81
Street Railways.....	4
<i>Financial.</i>	
Corporations	37
New Securities.....	30

Fire Damage, etc.

Machinery, Proposals and Supplies Wanted.....	49
Total for January.....	3,255

A 16,000-Acre Coal Development.

Sixteen thousand acres of coal, the Fire Creek smokeless seam, in Raleigh county, West Virginia, will be developed by the Fire Creek Smokeless Fuel Co. of Huntington. This corporation has been chartered with \$150,000 capital and the following officers: Thos. F. Bailey, Jr., of Huntington, vice-president; J. C. R. Taylor of Page, W. Va., secretary-treasurer.

Cigarette Paper and Tobacco Machinery, Etc.

Tobacco Mill Co., Ltd., F. Reinhardt, Moscow, Russia:

"Want to get in direct touch with American tobacco planters who are prepared to consider export business; also manufacturers of machinery for cigars and cigarettes, and with manufacturers of cigarette paper."

BIRMINGHAM PIG INACTIVE.**Furnace Production Materially Augmented—Enlarging Markets for Alabama Coal.**

Birmingham, Ala., January 29.—[Special.]—The pig-iron market continues inactive. Actual sales during the week were small, comparatively speaking. On every hand one hears of an ulterior bearish move on the part of some interest or clique. These are natural consequences. Such reports are always rife during periods of cessation in buying, especially when of such a sudden nature as at present. It is the opinion of the writer that the foundry interests have "felt the pulse;" they have listened to the stories, pro and con, and been contented to sit back and form some conclusions of their own. The big interests have sounded their notes of warning, and in that warning the buyer sees that the manufacturers of finished products have not only sold for a year ahead, but have made provision for their raw materials to cover the period. The foundries on basic iron will take care of the steel end. Furnace production of foundry iron has been materially augmented, and will be still further augmented with the furnaces that are to be blown in shortly. The foundryman knows this; therefore he is not rushing to get in on further deliveries than the first half, for he is shrewd enough to know that such a course would only tend to push prices up, for with a very material demand comes the thought that another 50 cents can be tacked on. The present price of \$15.50 to \$16 per ton at the furnace yields a handsome profit for the manufacturer, and with every 50-cent advance comes that dreaded backward swinging of the pendulum and dissatisfied customers.

The majority of the furnace interests are selling on the basis of prices given in table below. One large interest still quotes \$15 for first half delivery and \$16 for last half delivery. A price of \$15.50 for the third quarter is heard of. One lot of 5000 tons was sold during the week; balance of sales consisted of small lots.

No. 1 foundry and soft	\$15.50 to \$16.00
No. 2 foundry and soft	15.00 to 15.50
No. 3 foundry	14.50 to 15.00
No. 4 foundry	14.25 to 14.75
Gray forge	14.00 to 14.50
Basic	15.00 to 15.50
Charcoal	23.50 to 24.00

Bar iron prices have reached a high level. One interest reports the sale of this class of material last week at just exactly 100 per cent. advance over price for the same period last year. The Tennessee Company reports that it is out of the market on its steel products from Bessemer plants for the balance of the year.

The Gulf States Steel Co. blew in its large blast furnace at Alabama City during the week on basic iron.

The Republic Steel & Iron Co. sustained an accident at its No. 1 furnace, Thomas, last week, which will cost them practically 3500 tons of iron. The furnace is being repaired, and will be blown in again Monday or Tuesday. Its No. 2 furnace, however, was ready to be blown in at the time. By the end of the week all three furnaces will be in blast, producing in the neighborhood of 1000 tons of foundry iron per day.

Within a very short time announcement will be made of a second barge line between the Warrior coal fields on the Warrior River to New Orleans. The Alabama-New Orleans Transportation Co. now operates between these fields and New Orleans via the Lake Borgne Canal. The second line will ply between the two points through the Gulf of Mexico and up the Mississippi River. This will increase the tonnage of Alabama coal into the port of New Orleans by water several thousand tons per month.

Of very great interest to the district is the announcement by the Government that Alabama's higher grades of coal will be given exhaustive tests by the naval department. The coals to be tested vie with the celebrated Pocahontas coals of the Virginias. Already these coals are being supplied to the large vessel trade of Mobile and New Orleans, where formerly Virginia and Pennsylvania coals were used.

Along with the lull in pig-iron has also come a lull in the pipe market. While some good business is offering, yet there has been a slackening. Prices have not changed during the week, and are as follows per net ton f. o. b. cars at the plants here: Four-inch, \$27; six-inch and up, \$25, with \$1 per ton extra for gas-pipe and 16-foot length pipe.

The coke market continues strong. Considerable

coke is being shipped from the district to Mexico by different interests. The coke moves via New Orleans and Laredo (Tex.) gateway.

Y. A. DYER.

PROSPERITY ALONG SOUTHERN RAILWAY.**Farmers in Southern States Traversed by That Road \$200,000,000 Better Off Than Last Year.**

Washington, D. C., January 27.—"Farmers in the Southern States traversed by Southern Railway Co.'s lines are better off by at least \$200,000,000 than they were at this time last year," said President Harrison of the Southern Railway Co., commenting on the United States Agricultural Department figures of crop and live-stock values.

"The department figures of the values of the crops of cotton, including seed, grains, hay, tobacco, Irish potatoes, sweet potatoes and apples show a total for those States of \$1,188,630,000, as compared with \$1,020,179,000 last year, an increase of \$168,451,000. The value of livestock on farms in those States is reported by the department as \$10,228,000 greater than last year, bringing the total up to \$178,679,000, and if we add to this the increased value of various vegetable and fruit crops, for which figures are not yet available, the total will easily reach \$200,000,000.

"Although, on account of the large reduction in cotton acreage, the yield of cotton was substantially less than last year, the farm value of the cotton was \$16,872,000 greater, and of the seed \$40,952,000 greater, making the total value of the crop \$87,824,000 greater than last year. The result of the more general diversification of crops, which is the outstanding feature of present-day farming in the South, is seen in an increase of \$64,082,000 in the value of grains, an increase of \$18,846,000 in the value of hay, an increase of \$12,512,000 in the value of Irish potatoes and sweet potatoes, and an increase of more than \$10,000,000 in the value of livestock on farms. On account of the generally lower prices of farm animals throughout the United States, the increase in the value of livestock does not fully measure the progress of the South in the past year toward a realization of its great advantages for the production of meat and dairy products. The department figures show increases of \$3,000 head of milch cows, 200,000 head of other cattle and 984,000 head of swine.

"Taking into consideration the increased extent to which Southern farmers have produced supplies used on the farm, as well as the large increase in the value of their marketable products, I think it may fairly be said that the average condition of the farmers of the South was never better than it is today."

INCREASED COAL OUTPUT.**Exports Lately Hampered by Lack of Ocean Transportation Facilities.**

The production of bituminous coal and anthracite in the United States in 1915 is estimated by C. E. Lesher of the United States Geological Survey at 518,000,000 short tons, an increase over 1914 of less than 1 per cent. Bituminous production increased about 6,500,000 tons, and the output of anthracite was less than in 1914 by about 2,200,000 short tons. Reports from 100 coal-carrying railroads and from leading coal-mining operators and others familiar with the industry indicate that in the bituminous fields of the East production increased, where as in the area west of the Ohio there was a general decrease.

In the East, on account of the steady demand for export coal and for coke for steel making and the general improvement in business, the output of bituminous coal in Pennsylvania, West Virginia, Kentucky and Alabama increased to a gratifying extent. Ohio and Virginia also had increases, but Georgia, Maryland and Tennessee recorded decreases. The prosperous condition of the steel industry in the South is responsible for an increase of nearly 1,000,000 tons in the coal output of Alabama. Developments begun several years ago in West Virginia and in eastern Kentucky are now going at full capacity, and not a small part of the

demand for Kentucky coal comes from the by-product coke plants of the Middle West. The increase in Kentucky was about 2,000,000 tons, and in West Virginia approximately 4,500,000 short tons.

It is not unreasonable to consider that the increase in the East would have been much greater had it not been for a shortage of transportation facilities, but in spite of these difficulties the quantity of coal exported to Europe and South America during the first 10 months of 1915 exceeded the quantity exported in the same period of 1914 by about 3,000,000 tons. Yet exports to Europe and South America would have been larger in the fall had there been enough ships.

The markets for coal from the Mississippi Valley were more restricted in 1915 than for several years past. The railroads, the largest users of coal in that territory, are reported to have economized in their use of coal by decreasing the number of trains and by the introduction of more efficient methods of firing locomotives. The decrease in the output of coal in Illinois, Indiana and Iowa was close to 4 per cent., and in the Southwestern States—Arkansas, Kansas, Missouri and Oklahoma—the decrease was over 10 per cent. Largely because of the successful competition of natural gas and petroleum, the output of coal in Texas decreased in 1915 as compared with 1914.

Augusta Provides Immense Cotton Warehousing Facilities.

Augusta, Ga., January 29.—[Special.]—Augusta's facilities for handling an enormous quantity of cotton in the most approved modern way will be complete with the advent of the new cotton season this fall. Announcement has just been made that McFadden Bros. of Philadelphia, Rogers Company of Norfolk, together with local cotton men headed by A. H. Brenner, will build a new cotton compress and warehouse here to cost \$250,000, with a capacity for storing 77,000 bales of cotton. The building will be a large one, as 4,000,000 brick will be used in the construction work. Plans have been drawn by G. Lloyd Preacher, local architect, who has an intimate association with the cotton business and knows the needs of the warehousing system.

The Atlantic States Warehouse Co., already one of the largest enterprises of the country, will soon have completed its new addition for storing 25,000 bales, a sum between \$75,000 and \$85,000 now being expended on this addition. The company plans to take care of all demands made on it for warehouse facilities of all kinds.

The impetus given the warehousing and cotton compress business here comes as the result of the demand for the best obtainable in this direction in order to meet competition with other cities and sections that are making every possible effort to enlarge their cotton business. With the new warehouses completed and cotton compress details arranged satisfactorily Augusta will be prepared to finance and handle an enormous quantity of cotton and keep it in hand indefinitely, aiding in this way to market the crop systematically.

Septic Tanks for Isolated Dwellings.

Excluding the oxygen necessary to the life of disease bacteria and utilizing the anaerobes, or disease-destroying bugs, which thrive under the conditions that kill the disease bacteria, to prey on the disease bacteria and all animal matter present in sewage, is the method employed of purifying sewage in the United States sanitary septic tanks manufactured by the United States Sanitary Septic Tank Co., Memphis, Tenn. The chambers of the tank are so arranged that the solid matter settles to the bottom, where it is undisturbed by current and remains until destroyed. After thus being purified the water flows out, it is said, perfectly odorless and clear. The statement is made that bacteriological reduction of from 2,000,000 bacteria to the cubic centimeter to 5 in the same volume, is made by the tank. This gives an outflow purer than the average well water and safe to be allowed to drain off in the open.

The tanks are lastingly constructed of six-inch reinforced concrete, in sizes suited to single dwellings, groups of houses, schools, hotels, etc.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Record of Week's Progress in Improvements in City and Country.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Grand Saline, Tex.—City voted \$16,000 bonds for street improvements.

Jackson, Miss.—Hinds county will issue \$30,000 bonds to construct gravel roads in Edwards District.

Kingwood, W. Va.—Preston county, Kingwood District, voted \$160,000 bonds for road construction.

Ranson, W. Va.—City will issue \$8000 for street improvements, etc.

Tyler, Tex.—Smith county, Road District No. 2, voted \$100,000 additional bonds to complete road construction.

Victoria, Tex.—City voted \$30,000 bonds for street paving.

Bonds to Be Voted.

Clay, W. Va.—Clay county, Clay District, votes March 7 on \$100,000 bonds to construct roads.

Lockhart, Tex.—Caldwell county, Road Precinct No. 5, votes February 12 on \$10,000 bonds to construct roads.

Madisonville, Tex.—Madison county will vote on \$200,000 bonds to construct roads.

Ozark, Mo.—Christian county, Eight-Mile Special Road District, votes February 5 on \$40,000 bonds for road construction.

Contracts Awarded.

Carrizo Springs, Tex.—Dimmit county awarded contract for road construction; \$40,000 available.

Dallas, Tex.—City awarded \$7572.34 contract to grade Zang's Boulevard.

Higginsville, Mo.—City awarded contract to construct 12,000 square yards brick paving.

Lincolnton, N. C.—City awarded contract to pave five miles of 4½-foot sidewalks and 1200 square yards asphalt pavement.

Oklahoma City, Okla.—City awarded \$28,432 paving contract.

Paris, Tex.—City awarded contract to construct 7000 yards bitulithic pavement at \$16,100.

Contracts to Be Awarded.

Bartlett, Tex.—City will expend about \$60,000 on street paving.

Birmingham, Ala.—City will pave certain streets; estimated cost \$10,000.

Columbus, Miss.—Lowndes county, First, Second and Fourth Districts, appropriated \$123,000 for road construction.

Richmond, Va.—State receives bids until February 8 to build 11 miles of highway.

Pineville, Ky.—Bell county will improve three miles of road.

Plan for Government Aid of Postroad Construction.

Washington, D. C., January 31.—By a vote of 281 to 81 the House of Representatives has passed what is called the Shackleford bill, carrying an appropriation of \$25,000,000 to aid the States in improving their public roads used in the postal service of the Government. Sixteen or seventeen bills, probably more, relating to the same subject have been submitted to the House at its present session, and all of them, though differing somewhat in minor details, are to the same general effect, that it is well within the constitutional rights and is the imperative duty of the Congress to provide out of the public treasury for road construction.

The bill as it passed the House provides that in certain cases, clearly defined in the bill, the Secretary of Agriculture shall aid the States in the construction and maintenance of rural postroads, which means "any public road over which rural mail is or might be carried outside of incorporated cities, towns or boroughs having a population exceeding 2000." The expense of administering the fund thus provided is to be paid out of the fund. Each State is to receive outright the sum of \$65,000. One-half of the remainder is to be apportioned among the States according to population and the remaining half according to the mileage of rural free delivery routes, in the proportion that such population and rural free delivery routes bear to the population and free delivery routes of all the States.

The administration of the fund is to be under the general direction of the Secretary of Agriculture, and its distribution is to be regulated upon terms which will protect the Federal Treasury and assure the satisfactory completion of the work undertaken. The Secretary will do his part, through the highway departments of the several States, and, in the absence of such departments, through such representatives of the State as may be agreed upon by the Secretary and the Governor. Upon application from the States for aid in the construction of any rural postroad the Secretary is to decide whether or not the aid desired comes within the provisions of the bill, and if he shall decide in favor of the proposed road he shall require plans, specifications and estimates of cost for his approval. Upon approval and the acceptance of the State of the conditions upon which Federal aid will be given, the Secretary will have the authority to give not less than 30 per cent. nor more than 50 per cent. of the reasonable cost of construction or maintenance of the road thus approved.

All construction and maintenance of roads under this bill shall be under the supervision and control of the State highway departments of the States. In such States as have no highway department the apportionment of the fund for such State shall be expended in such manner as the Secretary and the Governor may agree upon. The Secretary is authorized to make or direct such examination and inspection of any road constructed or maintained under the provisions of the act and "to prescribe such rule and regulations for the administration of this act as he may consider expedient." All payments for road construction under the act are to be made upon warrants drawn by the Secretary of Agriculture. The State desiring aid under the act "may apply" and the Secretary may approve or reject the application.

If the maximum of \$25,000,000 provided in the act be appropriated, the total amount of aid to each State, counting present population, rural free delivery roads and star routes, will be: Alabama, \$579,180; Arizona, \$117,512; Arkansas, \$430,296; California, \$504,788; Colorado, \$253,168; Connecticut, \$258,638; Delaware, \$103,290; Florida, \$220,348; Georgia, \$722,494; Idaho, \$170,024; Illinois, \$1,372,330; Indiana, \$854,868; Iowa, \$841,740; Kansas, \$747,656; Kentucky, \$580,274; Louisiana, \$345,064; Maine, \$276,142; Maryland, \$318,808; Massachusetts, \$535,420; Michigan, \$850,492; Minnesota, \$733,434; Mississippi, \$497,130; Missouri, \$974,114; Montana, \$192,998; Nebraska, \$514,634; Nevada, \$101,102; New Hampshire, \$175,494; New Jersey, \$438,054; New Mexico, \$155,802; New York, \$1,594,412; North Carolina, \$655,760; North Dakota, \$325,372; Ohio, \$1,198,384; Oklahoma, \$532,138; Oregon, \$248,792; Pennsylvania, \$1,469,696; Rhode Island, \$139,392; South Carolina, \$442,430; South Dakota, \$337,406; Tennessee, \$694,050; Texas, \$1,070,386; Utah, \$143,768; Vermont, \$187,528; Virginia, \$591,214; Washington, \$301,304; West Virginia, \$340,688; Wisconsin, \$736,716; Wyoming, \$125,170.

The act does not mean that the United States is going into general road construction in the several States, but that it will aid the States in the construction of certain specified highways to the extent of \$25,000,000 annually, the States to provide a like amount for the construction of such roads. In round numbers, there are about 2,250,000 miles of public roads in the United States, and the last year the expenditures on account of road construction made by the States, counties, townships and districts, including the estimated value of convict labor, aggregated about \$235,000,000. It is estimated that the cost of construction and maintenance amounted to about \$260,000,000, so

that the appropriation provided for in the Shackleford bill is very small compared with the enormous amount required for road construction in the country. It is a beginning, however, and shows at least the progress of the good-roads movement.

Last year a similar bill was passed by the House by an overwhelming majority. The hearings by the special committee charged with the work lasted for weeks. The statement of the chairman in introducing the witnesses was that "there is no question in the minds of this committee as to the necessity for improving the roads of this country and desirability of the Government contributing something toward their construction and maintenance." In the present Congress there is none to question the necessity of good roads. The main objection made by members of the present Congress who spoke against the measure was the state of the Federal Treasury and the more immediate necessity of providing for the defense of the country against any enemies that might appear.

The Senate killed the bill last year. What it will do now remains to be seen. The present bill has been prepared with the greatest care, and is the result of the best thought of those who have given many years' study to the subject.

A Railroad's Interest in Good Roads.

The value of good roads to the railroad is strikingly shown as a result of a road that was built by the Nashville, Chattanooga & St. Louis Railway in Coffee and Franklin counties, Tennessee.

The first section of good roads built by the railway in Coffee county was 2½ miles long, and ran from near the Sparta branch crossing, out a street running from the center of Tullahoma and along the company's demonstration farm and connecting with a good county road running into Estill Springs.

This road opened up a large amount of territory and made it possible for automobiles and other vehicles to travel between Tullahoma, Decherd and Estill Springs. This is a 40-foot road, and has been graded and regraded and kept in splendid condition by the use of drags and has proven as well drained and as serviceable as a metal road.

The road was built under the direct supervision of J. H. Judd, special agricultural agent of the railway company, who also has charge of the company's demonstration farms. In the construction of this stretch of roadway it was necessary to put in seven culverts and two bridges, one being 42 feet long and the other 131 feet. Both bridges have three-inch flooring and are substantial structures, sufficiently strong to hold up the heaviest road machines built.

The other section of roadway constructed was 4½ miles long and 30 feet wide. The total cost of the seven miles built and the 2½ miles under way will be \$2282. Coffee and Franklin counties, as well as the town of Tullahoma, have been benefited greatly by these roads, and at the same time they serve as an object-lesson in road building, showing how by proper grading and dragging good hard dirt roads can be maintained at comparatively small cost.

One of the direct results of the improvement of these roads has been the increase in land values and the bringing of farmers in the interior section in closer touch with the towns and the railroads.

The management of the Nashville, Chattanooga & St. Louis Railway has shown itself in hearty sympathy with the good-roads movement, and is lending every aid in the encouragement of a sentiment for improved highways. This was demonstrated recently when the citizens of White county were enabled to grade 10 miles of the Bristol-to-Memphis Highway in a single day.

This work has brought many commendatory letters from citizens in the section traversed by the railroad, and an appreciation of this work is reflected in the recent election of President John Howe Peyton of the railroad as a life member of the National Good Roads Association.

West Virginia Continues Active in Road Building.

West Virginia has rapidly come to the front in voting bonds for modern roadways, and in nearly every section of the State the determination of the people

to secure good roads is reflected in the funds they are voting to build them.

The Kingwood district of Preston county has just voted by a large majority a bond issue of \$160,000 for roads, while some weeks ago the Portland district, in the same county, voted \$284,000.

These funds will provide in these two districts alone for nearly 50 miles of modern roads, some of which will be of concrete and some of macadam.

It is also understood that other districts in the county will vote bonds this year.

The County Court will probably let contracts for this work some time in March. Any information desired may be obtained from E. C. Everly, Clerk County Court, Kingwood, W. Va.

Modern Road System in Warren County, Mississippi.

At the recent annual meeting of the Board of Trade of Vicksburg, Miss., Secretary Frank H. Andrews in his report called attention to the splendid system of roads in Warren county, built largely through the efforts of the Board of Trade.

As pointed out by Mr. Andrews, the need of good roads in Warren county was outlined at a meeting of the Board of Trade several years ago, and energetic efforts were put forth to bring this about in co-operation with the county officials and engineers.

As a result of this work bonds to the amount of \$300,000 were issued for road improvement purposes.



SECTION OF WARREN COUNTY'S ROAD SYSTEM SHOWING DEEP CUTS TO MAINTAIN GRADE.

The system of roads as outlined, covering 28.5 miles, has now been completed. The total cost was \$320,381, or an average of \$11,241 per mile. All of the work done was under the supervision of G. R. Thomas of Vicksburg, Miss., resident highway engineer in charge.

Considerable engineering difficulties had to be overcome in the work, and the entire appearance of the county has been much changed in reducing and raising the grades, widening and straightening the deep, narrow gullies that were formerly used as roads. In many

places the old grades exceeded 20 per cent. These have been reduced to a maximum of 6 per cent., with one exception, which is 6½ per cent.

The graded roadbed is 24 feet on embankments and 30 feet in cuts. An accurate and complete record of every item of expense in connection with the work was kept, this record showing each car of material received, its number, weight, measurement, dates of shipment, arrival and release and the road and mile in which the material was placed, this being necessary, as the contractor was paid by the ton-mile haul.

The total amount of grading involved in the complete system was 447,916 cubic yards, or about 15,700 to the mile.

The following condensed statement shows how the road funds were expended:

Vincennes Bridge Co., bridge material furnished.	\$2,172.00
W. T. Young Bridge Co., bridge material and contract.	4,415.00
Vicksburg Bridge and Iron Works.	2,507.55
Southern Manufacturing Co., culvert pipe.	7,473.09
Novaculite Paving Co., road material (rock).	23,725.64
A. & V. R. R. Co., freight.	64,295.68
Owens Construction Co., construction work.	167,837.18
Merrill Road Improvement Co., asphalt surfacing.	14,177.45
H. F. Garbush, construction work.	21,070.63
Birmingham Slag Co., slag.	386.97
Engineering.	12,322.50
Total expenditure.	\$320,381.69

The amounts paid to the Owens Construction Co. and H. F. Garbush include all concrete work. All bridges and culverts were designed to carry 12 tons, and are of reinforced concrete and steel. Culvert pipe of cast iron was used, this being furnished by the Southern Manufacturing Co., Columbus, Miss.

The first two contracts of about 23 miles were let to

Road Improvement Co., Chattanooga, Tenn. Slag furnished by the Birmingham Slag Co., Birmingham, Ala., was used as a filler or aggregate for the asphalt. The remainder of the roads will be treated in like manner the coming summer.

At a cost of about \$11,000 Warren and Hinds counties co-operated in the construction of a steel-concrete bridge 520 feet long over the Big Black River. This structure is one of the longest of its kind in the State, and reduces the distance from Vicksburg to Jackson about five miles. The bridge was built by the Vincennes Bridge Co. of Vincennes, Ind.

In connection with their road work, Hinds and Rankin counties are making extensive improvements on their unimproved links of the Cross State Highway. When completed this will leave only about 20 per cent. of the distance from Vicksburg to Meridian unimproved. This Cross State Highway will be the Mississippi division of "The Dixie-Overland Route," extending from Savannah, Ga., to San Diego, Cal.

The two accompanying illustrations will give some idea of the high character of construction of the Warren county roads. The large amount of grading necessary is strikingly indicated in these photographs.

In laying out these roads G. R. Thomas, the resident highway engineer in charge, designed them along modern lines to meet modern traffic, and the people of the county are enthusiastic in their praise of the results accomplished.

EXPORTS FOR 1915 A BILLION DOLLARS GREATER THAN ANY PREVIOUS YEAR.

Imports Were the Lowest in Many Years—Enormous Increase in Gold Imports.

American exports for December exceed those for any previous month in the country's history, according to figures of the Bureau of Foreign and Domestic Commerce. The total value of the goods shipped abroad for the month is placed at \$359,301,274, which brings the total exports for 1915 to \$3,550,915,393, or about a billion dollars more than was ever before exported during a like period.

The excess of exports over imports for 1915 was \$1,772,300,538, which is a striking increase over the average of about \$450,000,000 for a number of years before the war started. The excess of exports over imports for December alone was \$187,459,600, an increase of about \$47,000,000 over December of the previous year.

The import trade continued to gain during December, and the total of \$171,841,665 was larger than for any other month of the year, and is an increase of \$57,185,120 over the total imports for December, 1914. It is \$12,183,906 short of the total for December, 1913, which was the largest in the history of our import trade. The total value of articles imported during the calendar year 1915 is placed at \$1,778,605,855, which is the lowest figure for a number of years. In 1914 the imports were placed at \$1,780,276,001; in 1913, at \$1,792,506,480, and for 1912, at \$1,818,073,055. Duty-free imports comprised 71.7 per cent. of the December, 1915, imports.

Gold imports in December last were valued at \$45,412,677, as compared with \$4,109,063 in December, 1914. The year's gold imports aggregated \$451,954,590, as against \$57,387,741 for 1914. Gold exports totaled \$11,889,285 for December and \$31,425,918 for the year ending with December, 1915. The net inward movement of gold for 1915 was \$420,528,672, compared with a net outward movement of \$163,228,415 in 1914.

The Cotton Movement.

In his report of January 28 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 181 days of the season was 8,685,384 bales, a decrease under the same period last year of 1,438,063 bales. The exports were 10,462,735 bales, a decrease of 909,203 bales. The takings were, by Northern spinners, 1,685,334 bales, a decrease of 1,330 bales; by Southern spinners, 2,413,833 bales, an increase of 477,027 bales.



AN EXAMPLE OF FINE ROADS BUILT IN WARREN COUNTY, MISS.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

OVER \$1,000,000 A DAY.

Pennsylvania System's Gross Earnings Rising Toward Former Figures.

The gross earnings of the Pennsylvania Railroad system during 1915, according to the statement just issued, were well above an average of \$1,000,000 per day, the total for the year being \$373,480,597, an increase of \$20,153,153 as compared with 1914. The operating income, after payment of operating expenses, was \$88,333,095, increase \$22,227,768. There was a decrease of more than \$2,000,000 in the expenses.

The statement for December shows operating revenue for the month of \$33,954,506, increase as compared with the same month of 1914, \$7,955,238; operating income \$7,919,621, increase \$5,142,157.

Chesapeake & Ohio's Extension.

Considerable progress has been made upon the construction of the northern extension of the Chesapeake & Ohio Railway from Sciotoville to Waverly, O., 28 miles, connecting there with the Norfolk & Western Railway. The piers of the large bridge over the Ohio River are now reported ready for the erection of the steel work, the pier contractor being the Dravo Contracting Co. and the steel contractor the McClintic-Marshall Construction Co., both of Pittsburgh. The bridge, including the approaches, is nearly 3500 feet long.

W. W. Boxley & Co. of Roanoke, Va., have the contract for the first section of the extension, about three miles long, immediately north of the river. It includes 450,000 cubic yards of earthwork and 1500 yards of concrete. Rinehart & Dennis of Charlottesville, Va., have the second section of seven miles, which requires 700,000 cubic yards of rock work, 600,000 yards of earthwork and 2500 yards of concrete. The third section is let to Winston & Co. of Richmond, Va.; it is nine miles long, and demands 80,000 cubic yards of rock work, 800,000 yards of earthwork and 10,000 yards of concrete. The Robert Grace Contracting Co. of Pittsburgh has the fourth section, also nine miles long and requiring 102,000 yards of rock work, 850,000 yards of earthwork and 15,000 yards of concrete.

All of the contractors, who are also employing a number of subcontractors, are reported to be making good time upon their respective jobs. It is expected that the extension will be ready for operation by May of 1917 at the very latest. It is probable that it will be finished sooner than that, maybe by several months. But heavy rock work was encountered, most of it in the second section, and besides the big bridge, there will be a viaduct 1080 feet long over the Little Scioto River, 12 undergrade crossings, six overhead crossings and numerous concrete culverts.

Shops to Repair Steel Cars.

The Southern Railway Co. will provide at its Coster shops near Knoxville, Tenn., a special shop for making repairs to steel cars. The use of this type of improved equipment has so increased upon the company's lines that it has been found necessary to make particular provision for maintaining its efficiency. The new shops will consist of an all-steel main shed 480x73 feet, with three tracks extending through it; also a workshop 100x51 feet. Both buildings will be equipped with overhead power cranes and a full complement of machinery and tools suitable especially for the steel work.

The contract for the construction of the steel frame for the main shed has been awarded to the Virginia Bridge & Iron Co. of Roanoke, but the material will be fabricated at the Memphis plant of that company. Construction is to begin before April 1, and is to be finished within six weeks from that time. All other work upon the improvement will be done by the railroad company's forces.

The Southern Railway has bought within the last

decade 23,000 all-steel and steel underframe cars, and the new shop will provide better facilities for keeping them in repair than could be had in the old shops, which were originally built for repairing only wooden cars.

Other additions to the facilities at the Coster shops will include a scrap dock with a reclaiming shop for the handling and reclamation of future accumulations of scrap resulting from car repairing; also an additional wash and locker room for the use of employees. The erection of these buildings will necessitate a revision of the track layout at the northern end of the yard.

Important Tunnel to Be Improved.

The Pennsylvania Railroad Co. has prepared plans to improve the tunnel between Union and Fulton stations at Baltimore, and a letter to Mayor J. H. Preston outlining them says it is intended to make extensive repairs, the object of the work being to complete the invert, construction of which was begun many years ago and never finished. At the same time the tracks in the tunnel, which is double-tracked, will be lowered so as to provide greater clearance for trains and making it possible to use the largest equipment through the tunnel without difficulty. The tracks are to then be laid permanently in concrete, the method of this construction to be like that pursued in building the New York tunnels of the company.

During the period of the repairs it will be necessary to abandon the use of about one-half of the length of one track in the tunnel, so that this part of the line will have to be worked as single track while the work is proceeding. There will be both day and night gangs of men to finish the improvements as speedily as possible. It is also understood that the trains of the Western Maryland Railway, which now use the tunnel under a rental arrangement, will not use it while the reconstruction is in progress, but will enter and leave the city via the Green Spring Valley branch of the Pennsylvania Railroad, which connects with the Western Maryland's main line several miles northwest of Baltimore. It is expected that the tunnel improvements will be completed in about a year.

\$10,000,000 to Be Spent by Katy Road in Texas

In line with the policy recently outlined by C. E. Schaff, receiver, in a letter to the MANUFACTURERS RECORD, the Missouri, Kansas & Texas Railway will spend this year in Texas \$2,500,000 under its general program of betterments, this announcement being made at Dallas by W. A. Webb, chief operating officer of the system, whose headquarters are there. Moreover, he is reported as saying that the Texas lines of the system will spend within the next three years over \$10,000,000, the receiver having been authorized by the court to spend at least that much. The betterments in progress include ballasting with crushed rock, burnt clay and gravel, laying of new and heavier rails, replacement of wooden bridges with concrete, the purchase of new equipment, etc.

Southern Railway Gets a Medal.

President Fairfax Harrison of the Southern Railway recently received from the University of Cordova, Argentina, which was founded in 1613, a large and handsome silver medal conferred by it upon the company in recognition of its efforts to promote international trade relations between South American countries and the United States and the valuable and notable results of these efforts in stimulating the study of the Spanish language and literature and Latin-American history and economics in the schools and colleges of the South.

Southern Railway's Earnings.

A. H. Plant, comptroller of the Southern Railway Co., makes public the following figures as to earnings: Gross revenue, December, 1915, \$6,198,970; increase as compared with December, 1914, \$914,722, or 17.31 per cent.; a decrease as compared with 1913 of \$404,222, or 6.12 per cent.; operating expenses, taxes and uncol-

lectible railway revenues, December, 1915, \$4,050,430; increase as compared with 1914, \$64,186, or 1.59 per cent.; a decrease as compared with 1913 of \$503,813, or 10.07 per cent.

Corresponding results for the last six months of 1915 are as follows:

Gross revenue, 1915, \$34,376,793; increase as compared with 1914, \$1,611,217, or 4.92 per cent.; a decrease as compared with 1913 of \$2,605,246, or 7.94 per cent.; operating expenses, taxes and uncollectible railway revenues, 1915, \$24,117,403; decrease as compared with 1914, \$1,704,393, or 6.60 per cent.; as compared with 1913, \$2,755,630, or 10.25 per cent.

The comparison with 1913 is made because in 1914 the business depression resulted in revenues below normal.

Big Season for Carolina Mountains.

W. H. Tayloe, passenger traffic manager of the Southern Railway, while at Columbia, S. C., according to a report from there, said that there will be more than 100,000 visitors to the resorts of Western North Carolina during the coming spring and summer. It is expected that the mountain region will have the greatest season in its history, and the company is preparing to handle more passengers there than ever before. Many popular excursions are to be run.

A movement is also on foot, which is maturing, to make the forest reserve on the Southern slopes of Mount Mitchell, near Black Mountain and Ridgecrest, stations on the railway, an open area for recreation like the national parks and the Forest Service is co-operating with the company to induce people to go there for camping. Last summer there were about 90,000 visitors in Western North Carolina.

The Mount Mitchell Railroad now extends from Black Mountain to within about a mile of the summit.

\$1,000,000 Contract Awarded.

Contract has been awarded to James Stewart & Co., New York, for about \$1,000,000 worth of initial work in connection with constructing the \$1,800,000 freight piers and sheds recently decided upon by the Norfolk & Western Railway at Lamberts Point, near Norfolk. This contract consists of about 9000 feet of bulkhead (completion by July 1), southbound and northbound piers 1200x220 and 800x220 feet (completion by October 1) and 1,500,000 yards of dredging (completion by December 1). Bids for sheds and other superstructures will be invited as the above work advances. Plans include 12,000 creosoted piles, 4,000,000 feet of lumber, creosoted pile and timber construction, steel sheds, flat built-up roofing, wood floors, slips between structures and four tracks on each pier.

DOWN INTO THE EVERGLADES.

Atlantic Coast Line Will Locate Route for 80-Mile Extension in Florida.

A recent report from Miami, Fla., repeated the rumor that the Atlantic Coast Line would probably build an extension from Sebring, the southern terminus of its Haines City branch, down into the Everglades country, but also said that it would go across to Miami, altogether about 150 miles.

Referring to this, Chairman Henry Walters of the Coast Line telegraphs the MANUFACTURERS RECORD thus: "Atlantic Coast Line Railroad Co.'s engineers have been instructed to locate line in De Soto and Lee counties, Florida, from Sebring to Immokalee. No intention of building line to Miami. Construction not yet authorized by board."

It was also reported in Florida that the Seaboard Air Line would build an extension of its Lake Wales line, which runs east from Bartow, across the State to either St. Lucie or Fort Pierce, about 80 miles.

In relation to this letter President W. J. Harahan wires the MANUFACTURERS RECORD: "No foundation for report."

Lake Wales is 17 miles east of Bartow, and it was reported some months ago that a continuation of this extension would be pushed about 16 miles toward Lake Kissimmee, and this may be completed within a year or

so, according to the requirements of the territory which it would penetrate.

The Atlantic Coast Line's projected extension from Sebring is designed to give it entrance into the Everglades region, which is expected to develop rapidly as a result of the extensive drainage operations for the reclamation of that country. This extension has been surveyed in a preliminary way via Fort Thompson to Immokalee, about 80 miles, and this investigation, according to previous reports, was made last spring. It is believed that the company will begin construction this year. Such a line would give railroad facilities to the interior of Florida much farther south than they are at present enjoyed.

LARGE EQUIPMENT ORDERS.

Over \$3,500,000 Worth of Cars Building for Baltimore & Ohio.

Baltimore & Ohio Railroad has ordered 3000 steel hopper cars, 2000 of which will be built by the Cambria Steel Co. of Johnstown, Pa., and 1000 by the American Car & Foundry Co. of St. Louis. The estimated cost of this equipment is over \$3,500,000.

Pennsylvania Railroad has ordered the construction at its Altoona shops of 1000 all-steel automobile cars and 350 all-steel box cars for the company's lines west of Pittsburgh. The Pennsylvania will also build at its shops 50 passenger cars, 20 combination passenger and baggage cars and 5 baggage cars, all the latter for the lines east of Pittsburgh. These shops now have orders for 3500 cars.

Alexandria & Western Railway has ordered a mogul type locomotive from the Baldwin Works, Philadelphia. Jonesboro, Lake City & Eastern Railroad has also ordered 2 moguls from the same plant.

Southern Pacific Railroad is reported in the market for 500 automobile cars and 250 gondola cars, in addition to other equipment previously reported. The combies, halls, dining-room, banquet hall and reception company has ordered 20 Mikado type locomotives from the American Locomotive Co.

Nashville, Chattanooga & St. Louis Railway, which is in the market for 2 postal cars, will build 1000 steel underframe box cars at its own shops at Nashville.

Chesapeake & Ohio Railway has ordered 3000 tons of rails from the Pennsylvania Steel Co.

Georgia Southern & Florida Railway has ordered 375 steel underframe box cars of 30 tons capacity and 130 all-steel drop-bottom gondola coal cars of 40 tons capacity from the Lenoir City Car Works, Lenoir City, Tenn.

Southern Railway is reported getting prices preliminary to an order for 500 automobile cars and 250 Hart convertible cars.

Missouri, Kansas & Texas Railway is expected to order soon 200 motor cars for track inspection and similar work.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Boston Textile Show.

It is announced that over 300 exhibitors have arranged to make displays at the Fifth National Textile Exhibition, which will be held in Boston April 24 to 29.

This exhibit will cover the complete range of textile machinery and accessories, and there will hardly be a machine of importance used in a cotton mill, starting with the picker-room and including dyeing, finishing and clothroom equipment, that will not be shown in operation.

The Boston Show is held every other year, and at

the exhibition two years ago it is estimated that the attendance ran fully to 20,000. This exhibition has come to be an important event in Northern textile circles, and it was with the idea of having a similar undertaking in the South that the Southern Textile Exposition was organized and held its first show last fall, which proved such a marked success.

Textile Machinery Wanted.

W. T. Ligh & Bros., importers of natural raw indigo and linens, Port Richmond, S. I., New York:

"We are expecting some Chinese raw linen fiber, and will want to get in touch with some manufacturer who has the machinery suitable for handling such fine thread. We were told by an expert chemist that it is the best material he had ever seen for weighting silk. I am sending you a sample of the fiber, also a piece of the linen made on the hand loom. There may be someone among your advertisers who may be interested."

Investigating Locations for Mill.

J. F. Carter, Jr., Mobile, Ala., contemplates establishing a plant for manufacturing woolen sweaters and sweater coats. He has not decided upon location, and is prepared to correspond with development organizations interested in securing new industries for their cities.

5000 Additional Spindles.

An additional installation of 5000 spindles has been decided upon by the St. Pauls (N. C.) Cotton Mill Co., now operating 7000 spindles and accompanying equipment. The company will build an addition to its mill building in order to provide space for the new machinery.

\$13,500 for Additions.

About \$11,500 for building a one-story factory addition and \$2000 for office and factory alterations will be invested by the American Manufacturing Co. of St. Louis.

Textile Notes.

The Thread Mills Co., Spray, N. C., will build a knitting mill at Leakesville, N. C., as reported January 27, but is not ready to state any details.

The Lowell (Mass.) Bleachery has increased capital from \$400,000 to \$600,000 and will erect a 187x100-foot three-story brick and wood mill construction building, costing \$60,000, for permanent plant to succeed its temporary bleachery at St. Louis. It will install machinery for bleaching and finishing cotton goods. This company was mentioned January 27 as having increased capital and to build this plant.

Forty automatic looms will be installed by the Oconee Mills Co., Westminster, S. C., this machinery having been ordered from the Draper Company of Hopedale, Mass.

The Henderson Manufacturing Co., Hampton, Ga., has organized to consolidate present cotton-yarn mill, underwear knitting mill and bleachery. It has 4000 ring spindles, 40 knitting machines, etc., and is capitalized at \$200,000. A. J. Henderson is president and A. M. Henderson secretary-treasurer. This company was mentioned January 27 as having incorporated.

An increase of capital by \$30,000 has been decided upon by the Gem Yarn Mills of Cornelius, N. C.

Automatic Open-Hearth Reverser.

Advantages in use that will make it a factor in the operation of open-hearth furnaces are claimed for the Schumann device for automatically reversing open-hearth furnaces in operation, by the Codd Tank & Specialty Co., 406 W. Camden street, Baltimore, which is marketing the device. It is designed regularly in sizes from 15 to 250-ton furnaces. The main features claimed for the device are that it increases the capacity

of the furnace an appreciable degree, keeps the checkers more evenly heated, more than pays for itself in a year in labor saving alone, and gives burners longer life. The installation cost is said to be about half that of older forms of automatic devices.

On a 50-ton steel furnace near Baltimore, where the device has been in operation for over eight months, it has proved its worth. Since being so equipped the furnace referred to has made one more duplex heat every 11 hours. The device has not cost a cent for repairs.

As the construction is extremely simple and consists in the main of standard goods, the Codd Tank & Specialty Co. is selling rights to install the device, with working drawings, rather than manufacturing it outright.

The William S. Whiting Plant.

Because of increasing demands, William S. Whiting will install additional woodworking machinery and electric motors costing \$10,000 and increase the capacity of drykilns from 150,000 to 300,000 feet in his plant for manufacturing flooring, parquet shapes, etc., at Elizabethton, Tenn. The new machinery will increase by 50 per cent, the present daily capacity of 300,000 feet 13-16 flooring, 150,000 feet 5-16 parquet squares and 200,000 feet 5-16 parquet strips. At Foscoe, N. C., 35 miles above Elizabethton, Mr. Whiting expects to complete by June 1 his sawmill, with daily capacity 60,000 feet hardwoods and hemlock, having drykilns of 500,000 feet capacity. The mill construction building is 500 feet long by 300 feet wide, and with offices, stores, etc., will cost \$25,000, while the new equipment will also cost \$25,000. The company acts as its own engineer and constructor. Its Foscoe development includes the construction of 25 miles of railroad.

\$1,850,000 Capital for Coal Mining.

Coal-mining developments requiring an investment of \$1,850,000 are proposed in West Virginia by the Ruth Coal & Coke Co. of Moundsville and the West Virginia Midland Collieries Co. of Palmer. The Ruth corporation is capitalized at \$350,000, and the incorporators are C. V. Riley of Moundsville, T. S. Riley of Wheeling, E. L. Denny of Waynesburg, Pa.; Geo. L. Hibbs and William Hankins of Uniontown, Pa. The West Virginia Midland corporation is capitalized at \$1,500,000, and its incorporators are William T. Turner, Clifford N. Miller, Maurice R. Dilne and others, all of Philadelphia.

Turning Brewery Into a Flour Mill.

Sistersville, W. Va., January 29—[Special].—Through the efforts of Secretary Jenkins and the Chamber of Commerce of Sistersville, Mr. C. E. King of Baltimore, Md., has recently purchased from citizens a vacant brewery building which will be operated as a flour mill. The plant covers about one and one-quarter acres of ground, is equipped with railroad sidings, has an elevator shaft and was but recently erected at a cost of \$150,000 complete with machinery. In fact, every part of the plant is exactly fitted for the installing of machinery to manufacture flour.

It is Mr. King's intention to install a plant with a daily capacity of 500 barrels flour, to be manufactured of high-grade winter and spring wheat. Machinery will also be installed for the manufacture of 20,000 pounds of cornmeal daily, and from 3000 to 5000 pounds of self-raising pancake flour. It is likewise expected that the stock feed will amount to 75 to 100 tons per day.

Mr. King was attracted to Sistersville by the low cost of power and available raw materials. With electric current at one-half cent per kilowatt horse-power combined with eight-cent natural gas and low freight rates, it was found that flour could be manufactured in Sistersville with less cost than in most cities.

Work on the reconstruction of the brewery building and the installation of machinery will begin in about three weeks. Contracts have been let for the machinery, and it is expected that the milling will commence in about eight weeks all told.

The company will be known as the Sistersville Milling Co.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ark., McCrory.—Bayou De View Drainage Dist. No. 1 of Cross, Jackson and Woodruff counties will construct drainage system; 1 main ditch and 6 lateral ditches; remove 2,000,000 yards earth; work offered in separate contracts or as a whole; bids open Feb. 15; plans, specifications, maps, etc., on file at offices of Clerk Cross Circuit Court at Wynne; R. J. Kibler at Hickory Ridge; F. W. Beedle at Beedeville; Bank of McCrory at McCrory, and Burr, Stewart & Burr at Paragould, Ark. (See Machinery Wanted—Drainage Construction.)

Ga., Atlanta.—Fulton County Board Road and Revenue let contract Case & Cotheran, 1507 Candler Bldg., Atlanta, to construct two 75-ft. reinforced concrete approaches for Chattahoochee River bridge on Mason-Turner Rd.

W. Va., Berkeley Springs.—Morgan county will build 2-span reinforced concrete arched bridge across Sleepy Creek; each span 55 ft. long, with 14-ft. roadway; plans, specifications, etc., upon application to State Road Bureau, R. P. Davis, Bridge Engr., Morgantown, W. Va. (See Machinery Wanted—Bridge Construction.)

W. Va., Fairmount.—City is reported to vote, probably in March, on \$400,000 bonds to construct 2 concrete bridges. Address The Mayor. (See Road and Street Work.)

W. Va., Hinton.—Summers county will build 400-ft. bridge across Greenbrier River; receive proposals on steel bridge of 3 spans or on reinforced concrete arch structure; bids until Feb. 12; for plans, specifications, etc., address State Road Bureau, R. P. Davis, Bridge Engr., Morgantown, W. Va. (See Machinery Wanted—Bridge Construction.)

CANNING AND PACKING PLANTS

Ala., Tuscaloosa.—J. W. Greer, Moultrie, Ga., is reported interested in plan to build meat-packing plant.

Ark., Van Buren.—J. L. Rea plans to build cannery.

Fla., Marianna.—Milton Land & Investment Co. may establish sweet-potato canning plant and peanut-oil mill; build warehouse and mill; has not arranged for building.

ing plants. (See Machinery Wanted—Oil-mill Machinery; Canning Machinery.)

Fla., Tampa.—Florida Packing & Provision Co. will build meat-packing plant; 96x54-ft. fireproof construction; let contract McGucken & Hyer, Tampa; C. J. Hyer, Archt., Tampa; Geo. Booth, Mgr.; company lately noted organized with \$100,000 capital, etc. (See Machinery Wanted—Packing-plant Equipment.)

Md., Hagerstown.—Nelson F. Brooks of Preston, Md., contemplates establishing cannery; annual capacity 150,000 cases.

N. C., Seaside.—F. S. Webster will establish plant for canning seafoods. (Lately mentioned under Shallotte.)

CLAYWORKING PLANTS

Ky., Rockport—Tile.—A. E. Jennings of Central City, Ky., is reported to establish tile factory.

La., Lake Charles—Bricks.—DeLatte & LaGrange, capital \$40,000, Incptd.; A. DeLatte, Prest.; Adolph LeGrange, V.-P.; Chas. J. Davidson, Secy. Treas.

Okla., Ponca City—Bricks.—Ponca City Buff Brick Co. organized; J. G. Ramsey, Prest.; Dave Oliver, V.-P. and Gen. Mgr.; W. J. Smith, Secy.; will erect 110x45-ft. building, with 45x40-ft. engine and boiler room; ordinary construction; install machinery to handle shale by pugging and dry-press processes; manufacture common brick, face brick, pavers, etc.

Tex., Bridgeport—Bricks, etc.—Bridgeport Brick & Tile Co., capital \$60,000, Incptd. by Ben J. Tiller, W. T. Simmons and A. J. Glendenen, all of Fort Worth, Tex.

Tex., Groesbeck—Bricks.—Groesbeck Brick Co., capital \$17,000, Incptd. by C. S. Brindley, R. L. Underwood, Dan Parker and C. C. Frampton.

COAL MINES AND COKE OVENS

Ala., Alabama City.—Gulf States Steel Co., Birmingham, and 55 Cedar St., New York, will build by-product coke plant; James Howron, Prest., Birmingham, wires and writes to Manufacturers Record: Signed

contract with H. Koppers Co., Pittsburgh, Pa., for construction 37 by-product coke ovens; daily capacity 450 tons; capacity sufficient to provide requirements for blast

furnace coke; new plant contiguous to blast furnace; coke will be used there and surplus gas utilized in steel works; coal chiefly from Virginia mines and partly from Altoona; unofficial reports state coke plant will cost \$900,000. (Recently reported contemplated, etc.)

Ky., Winchester.—Pritchard Coal Co., capital \$12,000, Incptd. by L. Kent Pritchard, M. T. McElroy and J. N. Hisle.

Ky., Williamsburg.—Burns Blue Gem Coal Co. increased capital from \$6000 to \$8000.

Okla., Pocahontas.—Eagle Coal Co., capital \$2500, Incptd. by G. W. Cook, Arthur Charlton and John M. Jones.

W. Va., Fayette.—Fayette Smokeless Coal Co., capital \$5000, Incptd. by Wm. Farrell of Fayette, Wm. F. Smith of Fort Thomas, Ky.; John W. Peck, F. C. Williams and R. S. Wright, each of Cincinnati, O.

W. Va., Bower.—Quaker Splint Coal Co., capital \$25,000, Incptd. by A. J. Sulzer, H. H. Pierce and others.

W. Va., Charleston.—Central Coal Co., capital \$50,000, Incptd. by V. H. Stuart, Homer Gray, Freeman Carte and others.

W. Va., Huntington.—Fire Creek Smokeless Fuel Co., capital \$150,000, Incptd.; Thos. F. Bailey, Jr., V.-P., Huntington; John C. R. Taylor, Secy. Treas.; Prest. and Mgr. not elected; controls 1600 acres coal land in Raleigh county and will develop.

W. Va., Omar.—Buffalo Creek Superior Coal Co., capital \$50,000, Incptd. by Wm. T. Jones, S. A. Wood, Alex. Lester and others.

W. Va., Moundsville.—Ruth Coal & Coke Co., capitalization \$350,000, Incptd. by C. V. Riley of Moundsville, T. S. Riley of Wheeling, E. L. Denny of Waynesburg, Pa.; Geo. L. Hibbs and Wm. Hankins of Uniontown, Pa.

W. Va., Omar.—Gilbert Creek Superior Coal Co., capital \$100,000, Incptd. by S. A. Wood, Alex. Lester, Wm. T. Jones and others.

W. Va., Palmer.—West Virginia Midland Collieries Co., capital \$1,500,000, Incptd. by Wm. T. Turner, Clifford N. Miller, Maurice R. Dilne and others, all of Philadelphia, Pa.

West Virginia.—Mullin Coal Co., capital \$25,000, Incptd. by E. A. Morris of Pittsburgh, Pa.; I. M. Cross of Youngstown, O.; R. M. Carpenter of Wilkensburg, Pa., and others.

COTTON COMPRESSES AND GINS

Ark., Pine Bluff.—Pine Bluff Compress & Warehouse Co. will erect plant buildings to cost \$30,000; opened building proposals Jan. 27; install compressing machinery with daily capacity 1800 bales cotton. (Noted in January to rebuild burned plant.)

La., Alston.—F. Dees will build cotton gin.

Ga., Augusta.—A. H. Brenner, Augusta; Rogers Co., Norfolk, Va., and Geo. H. McFadden & Bros., 121 Chestnut St., Philadelphia, Pa., are planning \$250,000 investment to build cotton compress and warehouse system; storage capacity for 77,000 bales cotton; warehouse with 67 compartments, each having capacity 1000 bales; construction to require 4000 bricks; G. Lloyd Preacher, Archt., Augusta. (Rogers Co. and others lately noted planning compress system, etc.)

COTTONSEED-OIL MILLS

Tex., Corpus Christi.—Corpus Christi Cotton Oil Co., J. C. Baldwin, Prest. and Mgr., increased capacity of seedhouse 80 ft. and added brick lint pressroom; daily capacity plant 50 tons.

DRAINAGE SYSTEMS

Ark., Newport.—Bayou de View Drainage Dist. No. 1 of Cross, Jackson and Woodruff counties, R. J. Kigler, Commr., Hickory Ridge, Ark., will open bids Feb. 15 at McCrory, Ark., for excavation on lately-noted canal construction; 16-mi. main ditch; one 12-mi. and one 4-mi. laterals; 3 mi. small laterals; drain 46,730 acres for agriculture. (See Machinery Wanted—Drainage.)

La., Gueydan.—Gueydan Drainage Dist. votes Feb. 29 on issuing \$250,000 bonds to construct drainage system for 70,000 acres.

Tenn., Savannah.—Hardin County Commissioners, A. A. Watson, County Judge, sold \$13,000 canal-construction bonds.

ELECTRIC PLANTS

Ala., Decatur.—City appointed Xavier A. Kramer, Magnolia, Miss., as engineer to investigate question of installing municipal electric lighting plant; when this investigation has been completed, plans and specifications will be prepared; Mr. Kramer to supervise construction. (Noted in January as contemplating construction of electric plant costing \$40,000.)

Ark., Ashdown.—Ashdown Light & Power Co. will install two Morse-Fairbanks oil engines; 25 and 75 hores-power, respectively.

Ark., Marianna.—Arkansas Light & Power Co., Arkadelphia, Ark., contemplates installing engine and generator.

Ark., Morrilton.—Arkansas Light & Power Co., Arkadelphia, Ark., is not prepared to state plan for rebuilding power station; will soon complete details. (Lately noted to rebuild station, etc.)

Ark., Newport.—Arkansas Light & Power Co., Arkadelphia, Ark., contemplates constructing power plant and installing new equipment, including engines, generator and switchboard.

Fla., Plant City.—City contemplates buying or building electric-light plant. Address The Mayor.

Ga., Aeworth.—City votes Feb. 15 on \$500 bonds for improvements to electric-light plant and water-works; P. O. McLain, City Clerk.

Ga., Folkston.—Chamber of Commerce instructed B. F. Scott, Prest., to investigate cost of electric plant for 500 lights, etc.; contemplates voting on bonds.

Ga., Madison.—Managers municipal electric-light plant contemplate purchasing and installing voltage regulator; G. W. Hubbard, Sup't.

Ky., Mt. Sterling.—City contemplates constructing electric-light system. Address The Mayor.

La., Opelousas.—City let contracts for repairs to power plant and water-works; to Thurston McKinney of Opelousas to erect power-plant building, and Layne & Bowler Co. of Rayne, La., to drill deep well; also contracted for engine for power-house, electric meters and 200 water meters; cost \$19,000 to \$200,000; T. G. Chachero, Building Archt., Opelousas. (Noted in December as inviting bids to reconstruct building of electric-light and water plant and for equipment, including 150 H. P. crude-oil engine direct connected to 100 K. V. A. alternator, generator panel, automatic voltage regulator, etc.)

Miss., Oxford.—City, G. A. Shafer, Sup't. Light and Water Plant, will install lately-mentioned 150 K. W. equipment to replace present steam outfit; open bids about Mch. 1. (See Machinery Wanted—Electrical Equipment.)

Mo., Aurora.—Lawrence County Water, Light & Cold Storage Co. will construct 6000-volt 3-phase 25-cycle transmission line to substation of Ozark Power & Water Co., 1½ mi.

Mo., Dearborn.—F. E. Jeffers has municipal franchise to supply electricity; secure power from McComas dam on Platte River.

Mo., Mount Vernon.—City will construct electric-light plant; will vote on about \$10,000 bonds; engaged Albert C. Moore, Engr., Joplin, to prepare plans and supervise construction.

N. C., Granite Falls.—Ivey Power Co., E. C. Ivey, Mgr., Lenoir, N. C., will build hydro-electric plant on Gunpowder Creek near Granite Falls; sell electricity to Citizens' Light & Power Co., Lenoir.

N. C., Hillsboro.—Hillsboro Power & Light Co., capital \$7500, Incptd. by S. M. Gattis, H. S. Cates and A. H. Graham.

N. C., Lenoir.—Citizens' Light & Power Co. will transmit electricity for light and power; let 10-year contract for electricity to Ivey Power Co. (See N. C., Granite Falls.)

Okla., Stratford.—City will vote on \$10,000 bonds to install electric-light plant. Address The Mayor.

S. C., Iva.—City contemplates construction of electric-light system; H. A. Orr, Mgr., local branch Southern Public Utilities Co., will submit proposition to furnish electricity.

S. C., Saluda.—F. A. Hugh, Atlanta, Ga., has 20-year franchise to build electric-light and power plant to cost \$6000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

G. C., Winnsboro.—City is reported to have arranged with Parr Shoals Power Co., Edwin W. Robinson, Pres., Columbia, S. C., to furnish electricity (from Broad River hydroelectric development) to operate municipal electric plant; power transmitted at 23,000 volts and step down to 2300 volts, 60 cycles, by three 75 K. V. A. transformers; T. R. Ellison, City Supt. (Laterly erroneously reported arranging with Georgia-Carolina Power Co., Augusta, Ga.)

Tenn., Knoxville.—City Commission is investigating cost of constructing and equipping electric plant; may build station; cost estimated at \$200,000.

Tex., Burnet.—Marble Falls Water & Power Co., M. M. Berry, Mgr., Marble Falls, Tex., contemplates extending electrical transmission line to Burnet.

Tex., Comanche.—Texas Power & Light Co. of Brownwood, Tex., purchased electric-light plant and will construct transmission line from Brownwood to Comanche via Blanket.

Tex., Jourdanton.—City issued \$30,000 warrants for purchase of locally-owned water and light plant. Address The Mayor.

Tex., Lockhart.—Citizens' Water, Light & Power Co. will construct water-works, electric light and ice plant; Henry Exall Elrod, Engr., Dallas, Tex. (See Water-works.)

Tex., Marble Falls.—Marble Falls Water & Power Co., M. M. Berry, Mgr., lately noted to make improvements, contemplates transmission line extension to Burnet. (See Tex., Burnet.)

Tex., Tyler.—F. C. Cotton of Denver Col., is reported to have purchased property of Tyler Traction Co., to install machinery in power plant and extend transmission system.

Tex., Victoria.—City engaged engineers to plan construction electric-light plant; previously voted \$40,000 bonds. Address The Mayor.

Va., Yale.—Monson Mfg. Co. may install electric plant for lighting. (See Machinery Wanted—Electrical Equipment.)

FERTILIZER FACTORIES

Fla., Tampa.—Interstate Chemical Corp., Chas. S. Bryan, Treas., 220 5th Ave., New York, will rebuild Tampa Fertilizer Works. (Lately noted burned at loss of \$35,000.)

FLOUR, FEED AND MEAL MILLS

Ala., Birmingham.—Farmers & Ginners Cotton Oil Co. will build plant with 24-hour capacity 100 tons mixed feed; erect building and install machinery; raw materials to include grain, velvet bean, etc.

N. C., Hemp.—D. H. Horner will install flour mill; daily capacity 50 bbls.; has purchased equipment; operate by water-power; will erect 30x40-ft. mill-construction building. (See Machinery Wanted—Water-wheel.)

Oklahoma, Muskogee.—Dorchester Milling Co. capital \$20,000, Incptd. by Chas. P. Gotwals, E. P. Thompson and W. E. D. Sney.

Tenn., Greenville.—Harvey Reaves, J. A. Park and S. Bruce Alexander are interested in organization of company to establish roller flour mill.

Tenn., Lone Mountain.—Lone Mountain Milling Co. will erect mill building costing \$4000 to \$6000; brick construction; install machinery for daily capacity 100 bbls. flour, 400 bags meal and 100 bags feed; lately noted to rebuild burned plant. (See Machinery Wanted—Flour-mill Machinery.)

Tenn., Springfield.—C. A. Bell, Tony Dowlen, E. H. Trenary and others will build flour mill.

Tex., Laredo.—Louis Joseph and others will build mill; 3-story corrugated-iron building with concrete foundation; ordered machinery; initial daily capacity 100 bbls. flour.

Tex., Sour Lake.—Sour Lake Grain Co., capital \$3000, Incptd. by J. E. Josey, R. C. Miller and Will Wharton.

Va., South Boston.—Boston Milling Co., M. F. Tugge, Prest., will install 50-barrel roller flour mill equipment.

W. Va., Huntington.—Gwynn Bros. & Co. will build addition to mill; 5 stories; reinforced concrete construction; increase capacity for grain, install grain dryer, etc.; has daily capacity 350 bbls.

W. Va., Sistersville.—Sistersville Milling Co. (C. E. King) will establish mill; daily capacity 500 bbls. flour, 20,000 lbs. cornmeal, 300 to 500 lbs. self-raising pancake flour, and probably 75 to 100 tons feed; purchased and will reconstruct former brewery plant; plant covers 1½ acres; has railroad sidings, elevator shaft, etc.; has let contracts for milling machinery to cost \$50,000; equipment includes two 75 and one 150 H. P. electric motors.

FOUNDRY AND MACHINE PLANTS

Ark., Monticello.—Machine Shop.—W. C. Byington, Tyertown, Miss., will install machine shop; has building.

Ala., Sylacauga.—Machinery.—Hagan Bros. Machine Co., capital \$2000, Incptd. by S. P. Hagan, Thos. L. Hagan, F. M. McDonald and J. J. McDonald.

D. C., Washington.—Machine Shop.—Henry Keller will remodel 2-story brick shop at 1418 N. Capitol St.; cost \$5400; Aug. Getz, Contr., 804 D St. N. E., Washington; A. S. J. Atkinson, Archt.

Fla., Lakeland.—Machine Works.—Peninsula Iron Works organized by C. V. Turner; invest \$20,000 to erect buildings and install machinery for general machine work and for manufacturing irrigation equipment, metal castings, etc.

Fla., Tampa.—Spraying Machinery.—Hardie Mfg. Co., Hudson, Mich., will establish plant to assemble spraying machinery manufactured in its Hudson plant; has suitable building.

Ky., Owensboro.—Engines.—Rodecker Engine Co., capital \$50,000, Incptd. by Chas. R. Rodecker, H. P. Quick and H. O. Moore.

Ky., Owensboro.—Machinery.—Anglo-American Mill Co. increased capital from \$260,000 to \$500,000.

Md., Baltimore.—Fiber Box Machinery.—Strong Box Co. of America, capitalization \$600,000, Incptd.; J. W. Weiss, Prest.; J. M. Raffel, V.-P. and Treas.; both of J. M. Raffel Co., Health and Clarkson Sts.; will manufacture and lease machinery to manufacture fiber boxes.

N. C., Salisbury.—Steel and Malleable-Iron Castings.—North Carolina Steel & Iron Co., capital \$50,000, Incptd. by P. H. Thompson, John S. Henderson and Ray P. Thompson; will manufacture steel and malleable castings; P. H. Thompson writes to Manufacturers Record: Organization has not been perfected nor have plant details been decided. (In January noted Incptd. under Iron and Steel Plants.)

Tex., Houston.—Oil-well Equipment.—Lucy Mfg. Co. of New York purchased Union Iron Works; reported to expend \$25,000 at once; 5 buildings; will manufacture and assemble disc-plow attachment for cultivators, stalk cutters and iron meter boxes.

Tex., Temple.—Disc Plow Attachment.—Duff-McNew Foundry & Machine Co. will enlarge capacity of plant, increase facilities and manufacture disc-plow attachment for cultivators, stalk cutters and iron meter boxes.

Va., Hopewell.—Brollers.—Noreck Broller Co., H. Noreck, Prest., Richmond, Va., will build plant to manufacture brollers.

W. Va., New Cumberland.—Steel Castings.—National Steel Casting Co., capital \$100,000, Incptd. by E. E. Kramer, Jos. Halbe, John Halbe, Paul Dadowski and E. Hertel, all of Pittsburgh, Pa.

W. Va., Wheeling.—Shrapnel Shells.—Wheeling Mould & Foundry Co. will double capacity to meet contract for 356,000 shrapnel shells.

GAS AND OIL ENTERPRISES

Fla., Mahanay.—Wm. T. Wells, Melbourne, Fla., writes to Manufacturers Record that local attorney, said to represent Beaumont (Tex.) operators, is securing optional oil and gas leases.

N. C., Wilmington.—Gas System.—Tidewater Power Co. engaged W. W. Randolph, Consult. Engr., New York; has completed plans for extending gas service to Wrightsville Beach and several intervening towns; 10 mi.; will install high-pressure pumping plant at gas works; cost \$40,000. (Noted in October as to expend \$50,000 to \$60,000 for gas-service extension, etc.)

Oklahoma, Arkoma.—Arkoma, Oklahoma, Oil & Gas Co., capital \$25,000, Incptd. by M. W. Murray and Jas. E. Reynolds of Arkoma, J. W. Underwood and J. S. Tetley of Fort Smith, Ark.

Oklahoma, Bartlesville.—Lycoming Oil Co., capital \$10,000, Incptd. by C. M. Boggs and H. H. Montgomery of Bartlesville and Robt. R. Cox of Caney, Kans.

Oklahoma, Blackwell.—Symbol Oil & Gas Co., capital \$50,000, Incptd. by Z. A. Harris, Robt. Valantene, O. M. Swain and others.

Oklahoma, Cushing.—Cushing Petroleum Co., capital \$16,000, Incptd. by W. D. Boggs, C. N. Travis, John Keeley and J. R. Travis.

Oklahoma, Nash.—Coldwater Pool Oil & Gas Co., capital \$5000, Incptd. by J. A. Alderson and J. J. Gibson of Nash and Samp P. Ridings of Medford, Okla.

Oklahoma, Nowata.—Protection Oil & Gas Co., capital \$12,500, Incptd. by Fred E. Ptak of

Oklahoma City; Warren Bearly of Paruna, Okla.; D. R. Smart of Protection, Kan., and others.

Oklahoma, Oklahoma City.—Augusta Petroleum Co., capital \$5000, Incptd. by Ellis Deeter, Oklahoma City; Floyd E. Slaughter, Washita, Okla., and Philo R. Smith, Wichita, Kans.

Oklahoma, Okmulgee.—Creighton Oil & Gas Co., capital \$10,000, Incptd. by J. C. Miller, G. W. Yerien and T. J. Farrar.

Oklahoma, Perry.—Egyptian Oil Co., capital \$5000, Incptd. by A. H. Lohsitz, H. B. Johnson, R. H. Kraemer and W. W. Watson.

Oklahoma, Sapulpa.—Klepinger Oil & Gas Co., capital \$20,000, Incptd. by C. R. Stanton of Sapulpa, J. C. Klepinger and L. V. Chandler of Kansas City, Mo.

Oklahoma, Sapulpa.—Oil Refinery.—Western Refining Co., Incptd. by C. W. Cross, W. A. Moyer, F. E. Gates and others.

Oklahoma, Tulsa.—Sunflower Oil Co., capital \$50,000, Incptd. by Chas. E. Bush, J. B. Foster, C. C. Herndon and F. M. Foster.

Oklahoma, Tulsa.—Universal Gas & Fuel Supply Co., capital \$25,000, Incptd. by T. J. Hartman, Jos. T. Lantry and Earl Sneed.

Oklahoma, Tulsa.—Jap Oil & Gas Co., capital \$10,000, Incptd. by H. D. Patee (20% E. 3d St.) and V. I. Patee, both of Tulsa, and C. M. Patee of Lawrence, Kans.

Oklahoma, Tulsa.—Glenrose Oil Co., capital \$25,000, Incptd. by W. A. Sipe, Jr., J. P. O'Meara and C. B. Kenney.

Oklahoma, Tulsa.—Winter Oil & Gas Co., capital \$30,000, Incptd. by C. R. Stanton of Sapulpa, Okla.; Jas. R. Winter and Geo. J. Taliferro of Kansas City, Mo.

Oklahoma, Tulsa.—Pensy Oil & Gas Co., capital \$10,000, Incptd. by J. A. Porter, W. R. Lindsay, W. M. Cappe and others.

Oklahoma, Tulsa.—Beaver Drilling Co., capital \$10,000, Incptd. by E. A. Ross, Henry N. Grimes and Charles W. Grimes.

Oklahoma, Tulsa.—Oil Refineries, etc.—Oklahoma Oil Co. (subsidiary of Tidewater Oil Co., Bayonne, N. J.) purchased White & Sinclair properties in Oklahoma; reported purchase price exceeding \$3,000,000; properties include oil wells with daily production 5000 bbls., extensive acreages, numerous leases, etc.

Oklahoma, Wewoka.—King John-Par Oil & Gas Co., capital \$50,000, Incptd. by J. A. King, R. W. Parmenter and J. Coody Johnson.

S. C., Greenville.—Gas Plant.—Southern Public Utilities Co. of Charlotte, N. C., let contract to build gas plant to cost \$45,000.

Tenn., Nashville.—Oil Refinery.—Cumberland Refining Co., capital \$25,000, Incptd. by Mitchell Long, W. F. Black, Forrest Andrews and others.

Tex., Austin.—Lone Star Petroleum Co., capital \$40,000, Incptd. by C. J. Williamson, H. A. Evans and Fred Adams.

Tex., Hardin County.—Bevers Oil Co., capital \$15,000, Incptd. to drill for oil on leases in Hardin county; O. C. Bevers, Prest., Edgerly, La.

Tex., Houston.—Oatley Well Drilling Co., capital \$4000, Incptd. by W. H. Oatley, F. P. Eastburn and Minor Stewart.

Tex., Houston.—Dixie Oil & Gas Co., 414 Fannin St., will drill 3 wells; use 4, 6 and 8-in. oil-well casing; M. A. Quilter, Engr., Humble, Tex.; lately noted Incptd. with \$15,000 capital. (See Machinery Wanted—Piping.)

Tex., Sherman.—The Texas Co., Houston, Tex., and 17 Battery Pl., New York, is reported to construct 6-in. pipe line from Sherman to Headton, Okla., 50 mi. (Lately noted, under Tex., Houston, to increase capital from \$37,000,000 to \$44,000,000, to continue developments and enlarge operations, etc.)

Tex., Sour Lake.—T. B. Y. Oil Co., capital \$7500, Incptd. by F. L. Thompson, J. H. Hudson and J. S. Young.

Va., Norfolk.—Economy Oil Corp., capital \$20,000, chartered; Ralph Benton, Prest.; C. F. Spain, V.-P.; John E. Johnston, Secy.

Va., Norfolk.—Economy Oil Corp., capital \$20,000, chartered; Ralph Benson, Prest.; C. F. Spain, V.-P.; John E. Johnston, Secy.

W. Va., Parkersburg.—Youghiogheny Oil Co., capital \$20,000, Incptd. by W. H. Miller of Parkersburg, D. S. Custer, H. L. Wolf, W. W. Savage and Clarence V. Guard, all of Friendsville, W. Va.

HYDRO-ELECTRIC PLANTS

Ark., Van Buren.—Guy Watkins, Little Rock, and Andrew R. Amis, Des Moines, Ia., are reported to construct hydro-electric plant.

ICE AND COLD-STORAGE PLANTS

Ark., Jonesboro.—Jonesboro Ice Co. will build cold-storage addition; 110x23 ft.; day storage on first floor and public cold-storage for perishable products on second floor.

Ark., Sparkman.—R. B. Ashby, Gibson City, Ill., will build ice factory to connect with J. R. Benson's electric-light and power plant.

D. C., Washington.—American Ice Co. will build addition to plant at 901 Water St. S. W., providing additional space for storage and office rooms; cost \$6000.

N. C., Mount Airy.—B. Beasley is reported as contemplating erection of ice factory.

Tenn., Johnson City.—Johnson City Coal, Ice & Cream Co., capital \$65,000, Incptd. by H. C. Black, E. E. Hunter, J. W. Franklin and others.

Tenn., Lafollette.—Lafollette Ice Co., capital \$10,000, Incptd. by Fred A. Joss, W. L. Bailey, J. Wili Taylor and others.

Tex., Crockett.—Crockett Ice, Electric Light & Power Co., C. W. Le Gory, Mgr., will install lately-noted loading machinery. (See Machinery Wanted—Ice-plant Equipment.)

Tex., Lockhart.—Citizens' Water, Light & Power Co. will construct water-works, electric-light and ice plant; Henry Exall Elrod, Engr., Dallas, Tex. (See Water-works.)

Va., Alta Vista.—W. W. Jenks, care of Chamber of Commerce, is reported to build cold-storage plant.

IRON AND STEEL PLANTS

Md., Baltimore.—Steel Furnaces.—Hess Steel Co., Henry Hess, Prest., Witherspoon Bldg., Philadelphia, progressing with construction of plant; 5 buildings in group; furnace building 60x50 ft.; rolling mill 400x300 ft., 40 ft. high, with ventilator roofs; laboratory; storage structure for raw products; office; steel construction with corrugated-iron siding and roof; buildings to cost \$30,000; Dietrich Bros., Contrs., Davis and Pleasant Sts., Baltimore; install 2 electric furnaces, rolling mill, etc.; manufacture alloy steel billets, etc.; electric power; all equipment purchased. (Previously noted Incptd. with \$1,500,000 capitalization, etc.)

Mo., Poplar Bluff.—Chicago Iron & Metal Co., Chicago, is reported as planning construction 2 furnaces; each with daily capacity 100 tons iron.

Mo., St. Louis.—Iron Furnace, etc.—Mississippi Valley Iron Co., capitalization \$5,000,000, organized by Edw. F. Goltra (Prest.), David R. Francis and others. Mr. Francis writes Manufacturers Record: "Acquired Vulcan Iron Co. plant in South St. Louis; company has deposit 5,000,000 to 10,000,000 tons low-grade iron ore at Yaukon, Iowa, and several manganese deposits in Arizona; begin smelting in four months."

IRRIGATION SYSTEMS

Tex., Bay City.—Matagorda County Commrs. will construct 800-ft. irrigation dam.

LAND DEVELOPMENTS

Ala., Birmingham.—Alabama Diversified Products Co., capital \$3000, Incptd.; Reuben F. Kolb, Prest.; J. B. Greene, Secy.-Treas.

Ala., Birmingham.—Saginaw Land Co., capital \$5000, Incptd. by Henry L. Badham, Jr., W. A. Reed and H. H. K. Jefferson.

Ala., Birmingham.—Dixie Southern Land Co., capital \$4000, Incptd. by John T. Wilson, H. H. Black and Frank W. Wilson.

Ark., Piggott.—Piggott Nurseries, capital \$25,000, Incptd. by H. H. Ballard (Prest.), E. H. Ballard and T. L. Davis.

Fla., Tampa.—Lewis A. Walter, Gen. Mgr. Cherokee Court Land Co., Louisville, Ky., purchased 300 acres on Old Tampa Bay; will develop for residential suburb.

Ky., Louisville.—Lewis A. Walter, Gen. Mgr. Cherokee Court Land Co., will develop land for residential suburb.

La., Crowley.—John Marsh Farm & Canal Co., capital \$50,000, Incptd.; John Marsh, Prest. and Gen. Mgr.; E. T. Lovell, V.-P.; Hugh M. Bone, Secy.-Treas.

Tenn., Knoxville.—City votes April 29 on \$50,000 bond issue for parks and playground; John E. McMillan, Mayor.

Tenn., Memphis.—Delta Land Co., capital \$25,000, Incptd. by John D. Dickson, N. S. Wright and others.

Tex., Bay City.—Bay Stock Farms Co., W. H. Ramsey, Mgr., will develop 12,000-acre tract, principally for cattle raising; also hog raising and general farming; erect farm buildings, silos, etc.

Va., Norfolk.—Sawyer-Adams Land Co., capital \$18,000, Incptd.; W. W. Sawyer, Prest.; R. J. Adams, V. P.

Va., Roanoke.—Villanova Park Corp., capital \$50,000, chartered; A. S. Petty, Pres.; E. W. Persinger, Secy.-Treas.

W. Va., Alderson.—East Gate Land Co., capital \$50,000, Incpd. by L. N. Cook, G. H. Thompson, H. B. Rowe and others.

LUMBER MANUFACTURING

Ala., Birmingham.—West End Lumber & Milling Co., capital \$500,000, Incpd. by N. E. Scherhaufer and others.

Ark., Little Rock.—Murphy & Earl Co., Parker, Ind., is reported to build mill and develop timber land.

Ga., Haynes.—Crauford-Knight Lumber Co., capital \$40,000, Incpd. by T. G. Crauford, J. G. Crauford and others.

Ky., Louisville.—Parkland Sawmill Co., capital \$100,000, Incpd. by Olf Anderson, W. R. Willett and C. E. Talbott.

Ky., Pike County.—Yellow Poplar Lumber Co., Leon Isanzen, Prest., Coal Grove, O., states as follows relative to lately-described development of timber tract: Not erecting plant at Johns Creek; is conducting timber operation through Paris Charles, Contr., who is constructing 42-in.-gauge steel railway, over which the logs will be transported final delivery at Coal Grove mills of Yellow Poplar Lumber Co.

La., Crowley.—Lawson & Nelson will rebuild planing mill noted burned at loss of \$1000.

Miss., Brookhaven.—Sunny South Lumber Co. will build planing mill and install machinery to increase capacity of plant.

Miss., Eucutta.—W. M. Carter Lumber Co., Laurel, Miss., will build mill; daily capacity, 20,000 ft. lumber; has ordered machinery; Chas. N. Carter of Laurel to be in charge.

Miss., Meridian.—Hughes Lumber Co., capital \$10,000, Incpd. by W. E. Baskin and R. E. Wilbourn of Meridian and S. P. Hughes of Electric Mills, Miss.

Miss., Vicksburg.—Anderson-Tully Co. contemplates construction sawmill costing \$50,000.

N. C., Foscoe.—Wm. S. Whiting, Elizabethton, Tenn., progressing with construction band sawmill; ordinary mill construction; 300x500 ft.; plans and construction by owner; daily capacity 65,000 ft.; hardwoods and hemlock; dry kilns, 500,000 ft.; cost of new equipment \$25,000; machinery not bought; cost of buildings, offices, stores, etc., \$25,000; completion contemplated for June 1; 25 mi. railroad under construction. (Previously noted.)

N. C., Newton.—John P. Yount, Geo. W. Setzer and D. Lee Setzer purchased timber land and will cut pine timber.

Tenn., Jellico.—W. T. Hicks will rebuild burned mill.

Tenn., Knoxville.—Knoxville Lumber & Mfg. Co. increased capital from \$50,000 to \$100,000.

Tex., Orange.—Lutcher & Moore Lumber Co. let contract for designing and constructing sawmill to Thrall & Shea, designers and millwrights, Lake Charles, La., and for machinery and materials to Filer & Stowell Co. of Milwaukee, Wis.; mill to have 10-hour capacity 200,000 ft.; install monorail system, electrically operated, with daily capacity 400,000 ft. lumber; total cost about \$750,000. (Noted in Dec.)

Va., Petersburg.—Powell Lumber & Supply Co., Box 90 (lately noted Incpd., capital \$25,000), will deal in building supplies at Dupont City, near Hopewell, Va.; let contract to Harrison Construction Co., Petersburg, to erect warehouse about 100 ft. square.

Va., Roanoke.—Kerns-Gates Lumber Co., capital \$25,000, Incpd.; O. A. Kerns, Prest.; E. W. Gates, Secy.

W. Va., Hiery Siding.—Star Lumber Co. will erect 60x30-ft. ordinary construction building; let contract to H. B. Lake, Berry Siding; will install circular gang edger, etc., costing \$5000; daily capacity, 10,000 to 15,000 ft. lumber.

W. Va., Charleston.—Cumberland Sawing Co., capital \$5000, Incpd. by Wm. G. Conley of Charleston; D. H. Shank of Cumberland, Md.; O. B. Conaway of Middlebourne, W. Va., and others.

METAL-WORKING PLANTS

Md., Baltimore—Tin Plate.—Baltimore Sheet & Tin Plate Co., capitalization \$3,000,000, will be organized by J. E. Aldred of New York, Chrman. Consolidated Gas, Electric Light & Power Co., Baltimore; J. M. Jones, V.-P. and Gen. Mgr. of Massillon (O.) Rolling Mill Co., and others; build tin-plate factory on river front; electric power; details being planned; Mr. Jones to be Gen. Mgr. (J. E. Aldred lately noted planning organiza-

tion tin-plate manufacturing company, etc.)

Md., Havre de Grace—Crosssties.—Maryland Metal Cross Tie Co. organized; offices at 627 Munsey Bldg., Baltimore; A. Freeborn Brown, Prest., Havre de Grace; Stevenson A. Williams, V.-P., Belair; Clarence C. Foreman, Secy., Govans; Wm. J. S. Millar, Trens., Baltimore; will build steel foundry with electric power; annual capacity 500,000 ties; plans include 400x200-ft. concrete, steel and glass building; manufacture Gorrell patented metal crosstie. (In December noted Incpd. with \$3,000,000 capitalization, etc.)

MINING

Ark., Rush—Zinc.—Standard Zinc Co., Box 161, Shreveport, La., capital \$125,000, Incpd.; Henry Sour, Fayetteville, Ark., Prest. and Mgr.; Bernard Sour, 17 W. 88th St., New York, V.-P.; Herman Zodrig, Secy.-Treas.; will develop 480 acres; capacity not yet estimated; date for opening mining machinery bids not set.

Ark., Yellville.—Phillips Mining & Development Co., capital \$5000, Incpd. by Grant Bowden, James R. Phagan and R. H. Bowden.

Ga., White County—Potash.—American Potash Co., capital \$25,000, Incpd. by D. L. Pitner of White county; Francis P. Cochran of Chicago, Ill., and E. M. Priest of New York.

La., New Orleans—By-products.—By-products Reclaiming Corp., Wm. H. Reid, Prest., 129 Front St., New York; establish plants at New Orleans, Brooklyn and Boston; special machinery; has let all contracts; Brooklyn plant completed; New Orleans plant completed by Mch. 1 and Boston by Apr. 1. (Noted in December as to build plants.)

La., Shreveport—Zinc.—Standard Zinc Co., noted Incpd. in January, capital \$125,000, will probably locate at Rush, Ark. (See Ark., Rush.)

Md., Hancock—Potash.—Round Top Sand Co. contemplates developing potash deposits in Tonaway Mountain; is considering installation of extracting and lime hydrating plants.

Mo., Kansas City—Lead and Zinc.—Maud S. Mining Co., capital \$60,000, Incpd. by O. W. Sparks, S. T. Carl and J. E. Buchanan, Mo., St. Louis—Dyes.—Chemical Dye Mfg. Co., capital \$20,000, Incpd. by Israel Kirsch, Dr. Chas. Rederer and A. L. Jacobs.

N. C., Charlotte—Gold, etc.—Consolidated Sales, Mining, Milling & Mfg. Co. organized; Frank Wilkes, Prest.; R. Burdge, V.-P.; M. Gronendyke, Secy.-Treas.; will develop mining properties in North Carolina and elsewhere; finance enterprises already begun. (Noted Incpd. in January with \$1,000,000 capital.)

Tenn., Columbia—Phosphate.—M. S. Orth of New York is reported to have purchased 231 acres phosphate lands and to develop.

Tenn., Columbia—Phosphate.—Ruhm Phosphate Co. of Mt. Pleasant, Tenn., purchased 52 acres phosphate lands and will develop.

Tenn.-Va., Bristol—Zinc.—Southern Zinc & Mining Co., Edward L. Patton, Prest., 115 Broadway, New York, will develop 1175-acre property; mine zinc ore and operate concentrating plant in Sullivan county, Tenn., and Scott county, Va.; machinery to include air compressor, drills, pumps, wet concentrating equipment, etc., for large capacity; lately noted buying and to develop zinc property; J. H. Banks, Mining Engr., 61 Broadway, New York. (See Machinery Wanted—Mining Equipment.)

Tex., Texarkana—Sand.—Texas Sand Co., capital \$5000, Incpd. by M. D. Tilson, H. H. Hancock and A. L. Lipscomb.

Va., Fredericksburg—Lead and Zinc.—Virginia Lead & Zinc Corp., Andrew Christian, Prest., will develop Holladay lead and zinc mines in Spotsylvania county; Richmond and Baltimore capitalists interested; ordered several carloads of machinery; is sinking shafts. (In December noted chartered with \$800,000 capital.)

Va., Richmond—Gravel, etc.—Swift Creek Sand & Gravel Co., capital \$200,000, Incpd.; Edmund Twohy, Prest., Shawwell, Va.; John H. Shaw, V.-P., Charlottesville, Va.; Herbert Wingfield, Secy., Richmond.

MISCELLANEOUS CONSTRUCTION

Ala., Cordova—Lock and Dam.—DeBardeleben Coal Co., Brown-Marx Bldg., Birmingham, may build lock and dam at Sanders Shoals on Warrior River; Henry T. DeBardeleben, Prest., advises Manufacturers Record that negotiations are in progress with War Dept.; this improvement proposed to avoid 21-mi. rail haul of coal from Slipsey mines to Cordova. (Lately noted under Coal Mines and Coke Ovens.)

Ark., Lake City—Levee.—W. B. Armstrong, J. B. Springer, Wm. Craddock and others plan constructing levee along St. Francis River.

Fla., Pensacola—Coal Pier.—Gulf, Florida & Alabama Ry., R. C. Megargel, Prest., 35 Pine St., New York, completing construction coal pier; will install machinery within next few weeks; coal machinery being built by Link-Belt Co., Chicago and Philadelphia. (In Oct. noted as follows: First unit of pier to have hourly capacity 600 tons coal; by installation 2 additional units can increase hourly capacity of single tower to 1800 tons; contract let to Link-Belt Co. for mechanical equipment, including installation for first unit.)

Fla., West Palm Beach.—City, A. M. Lopez, Clerk, will receive bids Feb. 24 for completion of seawall, improvements to sanitary sewer system and street paving, for which contract was noted let in May to Jonas & Garretson; Engr., J. B. McCrary Co., Third National Bank Bldg., Atlanta, Ga. (See Machinery Wanted—Seawall, etc.)

Md., Baltimore—Pier.—W. W. Boyer Co., 2327 Boston St., will occupy pier to be erected by Canton Co. (Commerce and Water Sts.) on Boston St.; structure to be 1 story high, 29x256 ft.; plans prepared by architects of Canton Co.

Md., Baltimore—Railway Tunnel.—Pennsylvania R. R. Co., Alex. C. Shand, Ch. Engr., Philadelphia, has plans for improvement to Union Tunnel, extending from Union to Fulton stations; lower tracks to provide greater clearance; lay tracks in concrete; follow construction methods similar to those in New York tunnels. (Mentioned in Dec.)

Va., Norfolk—Freight Piers.—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, Va., let contract at about \$1,000,000 to James Stewart & Co., 30 Church St., New York, for initial work in connection with construction of piers at Lambert's Point, consisting of about 900 ft. bulkhead (completion July 1), southbound and northbound piers 1300x220 ft. and 800x220 ft. (completion Oct. 1), and 1,500,000 yds. dredging (completion Dec. 1), bids for sheds and other superstructures to be asked as other work advances; plans include 12,000 creosoted piles and about 4,000,000 ft. lumber; creosoted pile and timber construction; steel sheds; flat built-up roofing; wood floors; slips between structures; 4 tracks on each pier; total cost \$1,800,000. (Heretofore noted under Buildings Proposed, Railway Stations, Sheds, etc.)

MISCELLANEOUS ENTERPRISES

Ala., Birmingham—Dry Cleaning.—E. & W. Dry Cleaning Co. Increased capital from \$10,000 to \$15,000.

Ala., Birmingham—Publishing.—Retail Butchers' Publishing Co., capital \$15,000, Incpd. by R. S. Matthews, T. B. Tanner and A. J. Jones.

Ala., Birmingham—Laundry.—Boss Laundry Co., capital \$5000, Incpd. by Augustus Spanagel and others.

Ala., Montgomery—Grain Elevator.—Hobble Elevator Co. will establish lately-noted grain elevator; 50,000 bus. capacity; H. M. Hobble, Prest.; J. M. Hobble, V.-P.; R. M. Hobble, Secy.-Treas.; erect building; probably steel construction, 200 ft. along railroad, 53 ft. deep; cost about \$50,000. (See Machinery Wanted—Grain Elevator (Steel).)

Ark., Beebe—Printing.—White County News, J. G. Hubbard, Mgr., will let contract Mch. 1 to David T. Thornton to erect 20x60-ft. brick building; plans by Geo. Davie; will install printing equipment. (Lately noted to rebuild plant.)

D. C., Washington—Studio.—National Geographic Society, 16th and M Sts. N. W., will enlarge photographic rooms on top floor, doubling present space for studio work; cost \$4000.

Ky., Louisville—Publishing.—Farmers' Home Journal Co., capital \$50,000, Incpd. by John W. Freeland and others.

Ky., Louisville—Publishing.—Kentucky Farming Publishing Co., capital \$12,000, Incpd. by T. M. Gilmore, W. W. Watts and Fred G. Bonte.

Md., Baltimore—Printing.—Daily Record, 321 St. Paul St., purchased building No. 15 E. Saratoga St., and will erect addition in rear; equip for printing plant.

Mo., St. Louis—Laundry.—J. Arthur Anderson has plans by Chas. H. Wray, Archt., St. Louis, for addition to laundry; 2 stories; brick; 50x165 ft.; open-air court in middle; cost \$10,000; also plans to erect smokestack 150 ft. high, brick and tile construction, at plant on McPherson Ave.

N. C., High Point—Laundry.—Crowders Bros., proprietors High Point Steam Laundry,

dry, will erect building; 2 stories; brick; 31x90 ft.; wooden floor in front; concrete floor in rear; cost \$3000.

N. C., Raleigh—Printing Plant.—News and Observer, Josephus Daniels, Prest., has plans by Frank R. Thomson, Raleigh, and will receive building proposals until Feb. 20 for rebuilding printing plant; 2-story-and-basement 47x86-ft. fireproof structure; reinforced concrete; fireproof windows; automotive sprinkler system; front to have basement story faced with North Carolina granite; upper stories of pressed brick with granite and terra-cotta trimmings; basement to accommodate press, paper storage, mailing-room, heater and fuel-room; editorial and business offices on first floor; composing and stereotyping rooms on second floor; steam heat; gas and electric lighting; electric freight and plate elevators; intercommunicating phones; carrier service, etc. (Previously noted.)

N. C., Wilmington—Printing.—Pittman-McColl Co., capital \$10,000, organized; install all steel equipment for printing plant; has ordered machinery; also purchased Union Stamp & Typewriter Co.; offices 29 Princess St.

Okl., Oklahoma City—Construction.—L. F. Lee Construction Co., capital \$10,000, Incpd. by R. L. Lee, G. M. Boxton and M. E. Lee.

Tenn., Greenville—Laundry.—R. W. Doughty contemplates establishment of laundry.

Tex., Austin—Printing.—Chas. I. Berg, architect, 331 Madison Ave., New York, is understood to be preparing plans for 16-story newspaper printing and office building; advises Manufacturers Record that he is not prepared to state any details.

Tex., Carrollton—Hardware.—Carrollton Hardware Co., capital \$5000, Incpd. by C. S. Hudson, Charles L. Chastain and J. B. Chastain.

Tex., El Paso—Laundry.—Elite Laundry Co. will install additional machinery costing \$18,000. (Lately noted to have increased capital from \$20,000 to \$50,000.)

Tex., Houston—Construction.—Womack Construction Co., capital \$30,000, Incpd. by Chas. M. Womack, John H. Kirby and others.

Tex., Houston—Hardware.—Adoue-Keweenah Hardware Co., capital \$12,500, Incpd. by J. D. Adoue, John Keween and L. B. Bryan, Jr.

Tex., Waco—Printing.—Amicable Life Insurance Co. will install printing plant on 2nd floor of Amicable Bldg.; equipment costing \$7000 purchased from Barnhart Bros. & Spindle of Dallas.

Va., Bristol—Engineering.—Southwestern Engineering Corp., capital \$10,000, Incpd.; W. R. Stone, Prest.; C. H. Cooper, V.-P.; A. K. Armitage, Secy.-Treas.

Va., Petersburg—Roofing, Plumbing, etc.—Williams Roofing & Plumbing Co. let contract to Harrison Construction Co., Petersburg, to erect 30x80-ft. ordinary construction building; purchased equipment for galvanized iron and sheet-metal shop; roofing, sheet metal, plumbing and heating; A. F. Williams, Prest. and Mgr.; W. F. Barber, V.-P.; A. P. Woods, Secy. (Lately noted Incpd., capital \$10,000.)

Ala., Attalla—Bottling.—Cola Nip Bottling Co., capital \$7000, Incpd. by F. M. Abernathy, Dr. J. N. Sledge, W. W. Abernathy and others.

Ala., Birmingham—Candy.—Levine-Abelson Candy & Grocery Co., capital \$10,000, Incpd.; S. J. Levine, Prest.; I. Abelson, Secy.-Treas.

Ala., Birmingham—Bottling.—McClain Alabama Co., capital \$15,000, Incpd.; C. S. Boyce, Prest.; N. O. Tyler, V.-P.; J. F. McClain, Secy.

Ala., Birmingham—Ice Cream.—Reinhart Ice Cream Co., capital \$6000, Incpd. by W. W. Smith, Robt. J. Riddle, Jr., and Raymond M. Jones.

Ala., Birmingham—Cotton Cleaner.—Atlas Cotton Cleaner Co., capital \$50,000, Incpd.; G. C. Stacy, Prest.; J. C. Stacy, V.-P.; J. A. White, Secy.-Treas.

Ala., Gadsden—Sewing.—North Alabama Mfg. Co. will install 8 additional sewing machines; now operating 25 machines.

Ala., Eufaula—Peanut Products.—H. H. Conner, Prest. Eufaula Cotton Oil Co., will install machinery to manufacture peanut products.

Ark., Walnut Ridge—Marble and Granite.—T. L. Moore of Poplar Bluff, Mo., will establish granite and marble works; M. L. E. Watkins to be in charge.

Fla., Greensboro—Fly Screens.—Decell Enterprise Co. will manufacture fly screens.

February 3, 1916.]

MANUFACTURERS RECORD.

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Fla., Jacksonville—Pianos.—Seminole Piano Mfg. Co. will install equipment to manufacture pianos; machinery to cost \$4000; daily capacity 2 pianos; W. A. Johnson, Mgr. (Lately noted Incptd. with \$40,000 capital.)

Fla., Marianna—Peanut Oil.—Marianna Land & Investment Co. may establish peanut oil mill. (See Canning and Packing Plants.)

Fla., Tampa—Motion-picture Studio.—National Film Corp. let contract Gilsonite Construction Co., St. Louis, to build bottling plant addition; fireproof construction; Wldmann-Walsh, Archt.; W. S. Ashton, Construction Engr.; both of St. Louis; install bottling machinery; ordered this equipment. (Lately noted to add additional, etc.)

Fla., Tarpon Springs—Bottling.—H. J. Smith will erect bottling works.

Ga., Macon—Bottling.—S. Mayer will remodel Waterman Bldg. for Chero-Cola Bottling Co.; structure to be brick; 80x100 ft.; concrete floor; office railing and equipment; cost of remodelling \$3000; total cost, including equipment, \$7000; Curran R. Ellis, Archt., Ellis Bldg.

Ga., Milledgeville—Ice Cream.—B. E. Adams, Jr. Box 125, interested in plan to establish factory for ice cream and kindred products; 5000 population. (See Machinery Wanted—Ice-cream Equipment.)

Ga., Richland—Bottling.—Columbus Coca-Cola Co., capital \$10,000, Incptd. by Columbus Roberts and H. C. Spence of Columbus, Ga., and others.

Ga., Savannah—Toys, Household Specialties, etc.—American Specialty Co. Incptd. by O. S. Kulman, Edwin Leffler, Max Leffler and A. S. Kohler; will build plant at River and Williamson Sts.

Ga., Savannah—Sugar Refinery.—Savannah Sugar Refining Co., B. A. Oxnard, Prest. and Gen. Mgr., has engineers, Westinghouse-Church-Kerr & Co., New York, preparing plans and specifications for construction of refinery; daily capacity 5000 bbls. sugar. (Noted in Dec. as organized with \$3,500,000 capitalization, etc.)

Ga., Tallapoosa—Well Tops.—W. H. Kimball Co. will manufacture well tops; is installing steam kilm, additional moulds, etc.; device is for securing pure water from wells.

Ky., Louisville—Vuleo Mfg. Co., capital \$25,000, Incptd. by H. V. Harris, Gordon L. Curry and J. W. Campbell.

Ky., Maysville—Syrup.—Maysville Syrup Co. contemplates installing 15 or 20 bottling plants in Kentucky, West Virginia, Ohio and Indiana. (Lately noted increasing capital from \$50,000 to \$75,000.)

Ky., Paducah—Tires.—A. N. Mason's Automobile Clincher Tire Remover & Replacer Co., capital \$10,000, Incptd. by A. N. Mason, Ivan Merritt and M. Stevers.

Ky., Paducah—Marble.—Paducah Marble Works, capital \$25,000, Incptd.; acquire Williamson marble yard; W. D. Stuart, Prest.; J. E. Williamson, V.-P. and Gen. Mgr.; H. F. Williamson, Secy.-Treas.

Md., Frederick—Tobacco Stemming.—J. E. Devaney of United Cigar Manufacturers' Co. is reported as contemplating erection of tobacco stemming.

Md., Security—Potash.—Security Cement & Lime Co., John J. Porter, Mgr., is reported to build \$50,000 electrically-driven plant to manufacture potash from cement rock; daily capacity 2 tons potash. (Lately noted as wiring Manufacturers Record regarding investigating methods of recovering potash from raw materials.)

Miss., McComb—Gloves.—Sam Woodruff contemplates increasing capacity of plant; present daily capacity 100 pairs.

Mo., Kennett—Incubators and Supplies.—Porter Electric Incubator Co. (lately noted Incptd. capital \$6000) organized; Lee Shelton, Prest.; W. B. C. Porter, V.-P.; Theo. Robb, Secy.-Treas.; E. Hall, Mgr.; has plant; manufacture incubators and incubator supplies. (See Machinery Wanted—Electrical Supplies.)

Mo., St. Louis—Garments.—National Garment Co., capital \$5000, Incptd. by Leo Frankel, Jacob N. Alberstein and Robt. Abrams.

Mo., St. Louis—Adding Machines.—Security Adding Machine Co., capital \$50,000, Incptd. by F. W. Quackenboss, Leo Hassieur, Jr., and C. A. Marquis.

Mo., St. Louis—Dry Goods.—Ferguson-McKinney Mfg. Co. Incptd. by Geo. N. Augustine, Forrest Ferguson, Murray Carleton and John J. Woods.

Mo., St. Louis—Cigars.—Moss & Lowenhaupt Cigar Co., capital \$70,000, Incptd. by Lee Cronbach, Henry Lowenhaupt and Abraham Lowenhaupt.

(See Machinery Wanted—Screen (Fly) Materials.)

Mo., St. Louis—Automobile Tops.—Continental Auto Top Co. leased building at 818 N. Leffingwell Ave.; will remodel for plant.

Mo., St. Louis—Chemicals.—Monsanto Chemical Works increased capital from \$400,000 to \$700,000; will expend \$200,000 to erect additional buildings—4-story 60x140-ft. brick warehouse, addition to power-house to supply 100 H. P. additional, and factory building for 3 departments.

Mo., St. Louis—Bottling.—St. Louis Brewing Assn. let contract Gilsonite Construction Co., St. Louis, to build bottling plant addition; fireproof construction; Wldmann-Walsh, Archt.; W. S. Ashton, Construction Engr.; both of St. Louis; install bottling machinery; ordered this equipment. (Lately noted to add additional, etc.)

Mo., St. Louis—Motor Patents.—Gor-Wes Motor Patents Co., capital \$50,000, Incptd. by Robt. Gordon, B. H. Weston and Wyman C. Herber.

N. C., Newton—Gloves.—Warlong Glove Mfg. Co., capital \$50,000, organized by Geo. A. Warlick and Luther F. Long; will establish glove factory; electric power.

N. C., Statesville—Creamery.—H. H. Blaylock will enlarge plant; has purchased machinery.

N. C., Waynesville—Boats.—Junaluska Boat Co., capital \$25,000, Incptd. by H. J. Sloan, H. E. Litchford, Jas. Cannon, Jr., and H. B. Atkins.

Okla., Sand Springs—Overalls.—Sand Springs Overall Factory, Chas. Page, Prest., will establish plant; build fireproof structure; install machinery to manufacture overalls, etc.; Dan Elchenfeld, Archt., Tulsa.

S. C., Charleston—Paper.—Woodstock Mfg. Co., capital \$3000, Incptd. by J. Freeman Williams and A. Dana Burbridge.

S. C., Columbia—Naval Stores.—Lloyd H. Grondy, 1409 Hampton Ave., may install equipment (destructive, steam and solvent processes) to extract naval stores from lightwood. (See Machinery Wanted—Distilling machinery.)

Tenn., Greenville—Creamery.—Chas. G. Hardin contemplates organization of company to establish creamery.

Tenn., Kingsport—Chlorine.—R. W. White and A. B. du Pont, both of New York, are reported to build chlorine plant.

Tex., Dallas—Lime.—Brans-Glass Engineering & Development Corp., 227 Slaughter Bldg., interested in plan to establish lime works. (See Machinery Wanted—Lime Equipment.)

Tex., El Paso—Optical Goods.—Southwest Optical Co., capital \$10,000, Incptd. by Marcus A. Wuerschmidt, Ralph E. Gibbs and Carl Ostertag.

Tex., Galveston—Shipbuilding.—Galveston Drydock & Construction Co., Chas. N. Crowell, Mgr., 318 City National Bank Bldg., has dredged slip for 1000-ton railway drydock and completed surrounding bulkhead; previously let contract Crandall Engineering Co., Boston, Mass., for 1000-ton marine railway; Galveston Company has plans by Mr. Crowell progressing for 10,000-ton sectional floating drydock; Galveston Company will design and build this part of its equipment, also various shops and general shipbuilding plant; will construct steel or wood vessels up to 300 ft. long and handle repairs for any ship entering port; all capital furnished by Galveston investors. (Outlined in December; mentioned in August in connection with plans of John P. McDonough.)

Tex., Llano—Paint and Pencils.—M. H. Arned and F. G. Tirard, Dayton, O., are reported investigating with building paint and pencil factory.

Tex., New Braunfels—Lime.—Dittlinger Lime Co. increased capital from \$100,000 to \$150,000.

Tex., Waco—Cereals.—Coco Wheatat Co., 206½ Franklin St. (lately noted Incptd., capital \$25,000), organized; Dr. P. A. Clark, Prest.; J. H. Field, V.-P.; C. W. McKenna, Secy. (See Machinery Wanted—Sterilizers, etc.)

Va., Alexandria—Mineral Water.—Clifton Springs Mfg. Co., capital \$100,000, Incptd.; J. Owen Lynch, Prest.; G. Raymond Ratcliffe, Secy.-Treas.; both of Alexandria; M. Lynch, V.-P., Manassas, Va.

Va., City Point—Bakery.—Appomattox Baking Corp., capital \$25,000, chartered; G. A. Perkins, Prest., City Point; J. H. Headen, Secy., Richmond, Va.

Va., Galax—Butter.—E. B. Crabil may establish plant to renovate butter; 100,000 lbs. annually. (See Machinery Wanted—Butter Machinery.)

Va., Hopewell—Wizard City Corp., capital \$5000, chartered; H. J. Hanna, Prest., Hopewell; W. O. Trenor, Secy.-Treas., Roanoke.

Va., Quantico—Explosives.—E. I. du Pont de Nemours & Co., Du Pont Bldg., Wilmington, Del., is reported planning to build large explosives factory.

Va., Richmond—Rubber Stamps, etc.—Reinach & Schwartz, capital \$25,000, Incptd.: Aubrey H. Reinach, Prest.; Irving I. May, Secy.

Va., Richmond—Cigarettes.—Export Leaf Tobacco Co. (branch of British-American Tobacco Co.) will install additional machinery for manufacturing cigarettes; has purchased this machinery.

Va., Roanoke—Candy.—Peerless Candy Co. increased maximum capital from \$25,000 to \$50,000.

Va., St. Paul—Extracts.—Swift & Co. and American Leather Co., Chicago, are reported to build plant to manufacture wood extracts, principally tannic acid; daily capacity 2 carloads lumber; use 500,000 gals. water daily.

Va., Suffolk—Peanuts.—Lummis & Co., main office, Philadelphia, Pa., will erect 48x88-ft. 5-story fireproof building; cost about \$20,000; J. K. Peebles, Archt., Norfolk, Va.; will install equipment, cost \$30,000, including electric motors, suction fans, iron and steel cylinders for polishing and grading, hoppers, spouts, leather and cotton belts, pulleys, shafting, etc., cup elevator and platform elevator; daily capacity 800 to 1000 bags peanuts (100 lbs. each); Chas. T. Taylor, Mgr., Box 507, Suffolk. (Lately noted to rebuild.)

Va., Suffolk—Peanut Roasting, Candy, etc.—Planters' Nut & Chocolate Co. will install machinery for peanut roasting and blanching; also erect 5-story peanut factory, candy factory and fireproof warehouse, all of brick construction; estimated expenditure \$200,000; C. W. Nelms, Archt.

Va., Toms Brook—Lime.—Rockdale Lime Co. will manufacture lime; has plant with daily capacity 40 tons; Wm. Paxton, Mgr. (Lately noted Incptd. with \$50,000 capital.)

V. Va., Clarksburg—Bakery.—Sanitary Baking Co. has plans by C. D. Cooley Co., Century Bldg., Pittsburgh, Pa., for 60x120-ft. ordinary-construction building for bakery; Cooley Co. will open building proposals about Mch. 1; Sanitary Company opens bids about May 1 on complete equipment, cost about \$16,000, for making bread and pastry. (See Machinery Wanted—Bakery Equipment.)

V. Va., Kenova—Sanitary Fixtures.—Sanitary Mfg. Co., J. H. Davis, Gen. Mgr., completed arrangements to acquire Independent Steel Co. plant at Kenova and remove plant from Hamilton, O.; 600x120-ft. pottery, 150x180-ft. seat and tank factory, 275x40-ft. brass foundry and machine shop with plating department, 100x60 and 50x50-ft. power plants, 40x25-ft. blacksmith shop and 80x40-ft. warehouse; all of heavy brick construction, equipped with sprinkler system; will lay concrete floors; build four 24-ft. kilns; install shaving and dust-collecting system; use 2 types of conveyors; install foundry equipment, metal-working machinery, hydraulic presses, hydraulic dies, woodworking machinery, accumulators, heavy-duty pumps, gas engines, electric motor and dynamo; manufacture sanitary closets, ball cocks, etc.; mentioned in August as capitalized at \$300,000 to build plant, etc. (See Machinery Wanted—Foundry Equipment, etc.)

V. Va., Parkersburg—Case Mfg. Co., capital \$10,000, Incptd. by Geo. Case, T. E. Graham, J. A. Brown and others.

V. Va., Martinsburg—Clothing.—L. Greif & Bro., Eutaw and German Sts., Baltimore, Md., leased second floor of Thornwood Hall and will install machinery, electrical appliances, etc., for clothing factory.

V. Va., Martinsburg—Clothing.—L. Greif & Bro., Eutaw and German Sts., Baltimore, Md., leased second floor of Thornwood Hall and will install machinery, electrical appliances, etc., for clothing factory.

V. Va., W. Va., Martinsville—Garage.—Acme Garage, capital \$15,000, Incptd.; H. V. Price, Prest.; J. B. Shumate, Secy.-Treas.

Va., Norfolk—Automobiles.—Wrenn Motor Car Co., capital \$100,000, Incptd.; C. O. Wrenn, Prest.; E. W. White, V.-P.; C. O. Wrenn, Jr., Secy.

Va., Richmond—Automobiles.—Motor Supply Co., capital \$15,000, Incptd.; John W. Watson, Prest.; F. B. Watson, V.-P.; Kenneth H. Cradick, Secy.-Treas.

Va., Berkeley Springs—Garage.—E. L. Johnson & Co. will erect fireproof garage.

Co., capital \$3000, Incptd. by J. S. Read, F. L. Lewis and J. W. Carrie.

Ky., London—Automobiles.—London Motor Car Co., capital \$5000, Incptd. by G. O. Watkins, J. S. Watkins and M. A. Watkins.

Ky., Louisville—Automobiles.—Breyfogle Green Co., capital \$6000, Incptd. by Forest Breyfogle, Sr., Forest Breyfogle, Jr., and Albert L. Green.

Md., Baltimore—Garage.—Edward Bauernschmidt, 1528 N. Gay St., is having plans prepared by E. Franklin Zipp, Parkville, Md., for garage; 1 story; 45x100 ft.; plans ready for bids about Feb. 7.

Md., Baltimore—Garage.—John J. Carlin, 215 St. Paul St., will erect garage on Rosedale Pl.; brick; 11x22 ft.

Mo., Crane—Automobiles.—Crane Motor Car Co., capital \$5000, Incptd. by T. B. Robertson, Jas. Williams and Neil Robertson.

Mo., St. Louis—Garage, etc.—Hudson Phillips Motor Car Co. has plans by John D. Paulus for garage, etc.; 290x135 ft.; install blacksmith shop, machine shop, second-hand car-repair shop, shower bathroom, etc.

N. C., Chapel Hill—Garage.—Tar Heel Garage & Theater Co., capital \$15,000, Incptd. by Bruce Strand, W. E. Lindsay and W. S. Robertson.

Okl., Alva—Automobiles.—Alva Motor Car Co., capital \$10,000, Incptd. by H. A. Noah, H. L. Noah and C. C. Noah.

Okl., Chickasha—Garage.—J. H. Griffin will erect addition to Barton Bros.' garage; 50x160 ft.; reinforced concrete; concrete floor; 2500 sq. ft. floor space.

Okl., Oklahoma City—Automobiles.—Maybury Motor Exchange, capital \$10,000, Incptd. by E. K. Mobley, Geo. L. Browning, V. V. Browning and Ed S. Vaughn.

S. C., Rock Hill—Automobiles.—Anderson Motor Co. (Rock Hill Buggy Co.) will manufacture automobiles; J. G. Anderson, Prest., advises Manufacturers Record: There will be no addition to plant; bodies and a few parts will be made in our regular buggy plant; will buy motors, transmission gears, etc. (Rock Hill Buggy Co. lately noted to manufacture automobiles.)

Tenn., Morristown—Garage.—G. T. Harris of Morristown and K. T. Kenner of Rogersville, Tenn., will build garage costing \$10,000; brick construction; concrete floors; 2 stories; electric elevator.

Tex., Cuero—Automobiles.—Cuero Auto Sales Co., capital \$5100, Incptd. by H. R. Forbes and C. C. Dickerson.

Tex., Dallas—Assembling Plant.—Studebaker Corp., Detroit, Mich., is reported to build assembling plant costing \$50,000.

Tex., Wichita Falls—Garage.—C. W. Snider and J. J. Perkins have plans for building at 5th and Scott Sts.; 2 stories; 100x90 ft.; first floor to be occupied by 2 automobile companies.

Va., Martinsville—Garage.—Acme Garage, capital \$15,000, Incptd.; H. V. Price, Prest.; J. B. Shumate, Secy.-Treas.

Va., Norfolk—Automobiles.—Wrenn Motor Car Co., capital \$100,000, Incptd.; C. O. Wrenn, Prest.; E. W. White, V.-P.; C. O. Wrenn, Jr., Secy.

Va., Richmond—Automobiles.—Motor Supply Co., capital \$15,000, Incptd.; John W. Watson, Prest.; F. B. Watson, V.-P.; Kenneth H. Cradick, Secy.-Treas.

Va., Berkeley Springs—Garage.—E. L. Johnson & Co. will erect fireproof garage.

RAILWAY SHOPS, TERMINALS,
ROUNDHOUSES, ETC.

N. C., Newbern—Norfolk Southern R. R. Co., F. L. Nicholson, Ch. Engr., Norfolk, Va., let contract Rhodes & Underwood, Newbern, to erect shop to replace burned structures; fireproof construction; new structures to be larger than those burned. (Noted in December.)

Tenn., Knoxville—Southern Ry., W. H. Wells, Ch. Engr. Const., Washington, D. C., will provide special shop for repairs to steel cars; new facilities to include 480x73-ft. main steel shed with 3 tracks and 100x51-ft. workshop; both equipped with overhead power cranes and full complement of machinery, etc.; steel frame construction; contract for main shed let to Virginia Bridge & Iron Co., Roanoke, Va., this material to be fabricated at Virginia company's Memphis plant; other additions will include scrap dock with reclaiming shop for handling future accumulations resulting from repairs to steel cars, etc.; all construction except steel frame for repair shed will be Southern's force. (Recently mentioned.)

ROAD AND STREET WORK

Ala., Birmingham.—Jefferson County Board of Revenue plans to construct road to Warrior River.

Ala., Birmingham.—Board Comms. instructed City Engr. Julian Kendrick to draw ordinance for paving 22d St. from 3d to 5th Ave., portion of 15th Ave. S. and Arlington Ave., with standard paving; estimated cost \$10,000.

Ga., Douglas.—City will pave streets in business section. Address The Mayor.

Ga., Folkston.—Chamber of Commerce instructed B. F. Scott, Prest., to investigate hard-surfacing for streets, etc.; contemplates voting on bonds.

Ky., Mount Vernon.—Rockcastle County Comms. will issue bonds to construct roads voted last April; issue validated by court.

Ky., Pineville.—Bell county will improve road from Four-Mile bridge to Knox county line, 3 mi.; County Comms. receive bids until Feb. 7; W. C. Bingham, County Clerk. (See Machinery Wanted—Road Construction.)

Miss., Canton.—Madison county, Supervisors' Dist. No. 2, has \$80,000 available for expenditure; contemplates constructing 20 mi. gravel roads; open bids Mch. 6; Xavier A. Kramer, Engr., Magnolia, Miss. (Noted in January as having issued bonds, etc.)

Miss., Columbus.—Lowndes County Road Comms., First, Second and Fourth Dists., authorized additional appropriations of \$40,000, \$50,000 and \$33,000 (total \$123,000) for road construction.

Miss., Jackson.—Hinds County Comms. will issue \$30,000 bonds to construct gravel roads in Edwards Dist. (County Comms. noted in December to have let contract Hinds County Highway Construction Co. and T. Jackson, both of Clinton, Miss., to construct 6½ mi. gravel roads in Edwards township.)

Miss., Laurel.—City will issue \$13,000 bond issue for street improvements; T. G. McCalum, Mayor.

Mo., Chillicothe.—City let contract to John F. Meek, Jr., Chillicothe, for brick and tarvia paving; city's paving improvements include 17,000 yards brick pavement already ordered, 20,000 yards brick pavement and 8000 yards tarvia to be ordered. (Lately mentioned.)

Mo., Liberty.—Clay county, Excelsior Springs Special Road Dist., deferred indefinitely vote on bonds for road construction. (Previously noted to vote on \$100,000 bonds.)

Mo., Ozark.—Christian county, Eight-Mile Special Road Dist., H. J. Neyer, Secy., will vote Feb. 5 on \$40,000 bonds for road construction.

N. C., Lincolnton.—City awarded contract to Noll Construction Co., Chattanooga, Tenn., to pave 5 mi. of 4½-ft. sidewalks and 1200 sq. yds. asphalt paving; extension of contract; Mike Hoke, Engr., Lincolnton. (Lately noted.)

Okl., Oklahoma City.—City let contract Sandringham Co., Oklahoma City, at \$28,432 to pave 13th St. and Stiles Ave.

Okl., Oklahoma City.—City let contract Sandringham Co. of Oklahoma City at \$28,432 to pave 13th St. from Dale Ave. to Lincoln Blvd. and Stiles Ave. from 12th to 13th St.; G. V. McClure, City Engr.

Okl., Pawnee.—City plans to pave 7 blocks of streets; let contract Benham Engineering Co., Oklahoma City. (Lately noted contemplating additional street paving.)

Okl., Tulsa.—Tulsa county, Skiatook township, is reported as contemplating issuance of \$20,000 bonds to construct roads. Address County Comms.

Tex., Bartlett.—City, J. Dadt, Secy., will expend about \$60,000 on street paving; Engr. not yet selected. (Bonds lately noted voted.)

Tex., Carrizo Springs.—Dimmit County Comms. let contract to Bexar Construction Co., San Antonio, Tex., to construct lately-noted roads; \$40,000 available.

Tex., Dallas.—City let contract Henry Culom, Dallas, at \$757,234 to grade Zang's Blvd. from Viaduct to Bishop Sts.; later will pave this street.

Tex., Grand Saline.—City voted \$16,000 bonds for street improvements. Address The Mayor. (Noted in Dec.)

Tex., Lockhart.—Caldwell county, Road Precinct No. 5, votes Feb. 12 on \$10,000 bonds to construct roads. Address County Commissioners.

Tex., Madisonville.—Madison county will vote on \$200,000 bonds to construct roads. Address County Comms.

Tex., Paris.—City, Ed. P. McCuistion, Mayor, let contract to Texas Bitulithic Co.,

Dallas, Tex., to construct 7000 yds. bitulithic pavement at \$16,100.

Tex., Tyler.—Smith County Comms., Road Dist. No. 2, Lee H. Powell, Engr., Tyler, voted \$100,000 additional bonds to complete road construction; completed roads begun in 1914 with original bond issue of \$300,000; amount of work involved, 60 to 70 mi. highway; S. H. Cox, Chrmn. Road Comms. (Lately reported to have voted \$100,000 additional bonds.)

Tex., Victoria.—City will pave streets; \$30,000 bond issue authorized. Address The Mayor.

W. Va., Buchanan.—Upshur county, Buckhannon Dist., Ernest Phillips, Clk., County Court, voted \$181,000 to improve 18 mi. road; engineer not yet engaged. (Bonds previously noted.)

Va., Richmond.—State Highway Commission, G. P. Coleman, Commr., will build 11 mi. of highway; receive bids until Feb. 8; plans, specifications, etc., on file. (See Machinery Wanted—Road Construction.)

W. Va., Fairmont.—City is reported to vote, probably in Mch., on \$100,000 bonds to extend streets and sewers, and \$400,000 bonds to build 2 concrete bridges. Address The Mayor.

W. Va., Clay.—Clay county, Clay Dist., votes Mch. 7 on \$100,000 bonds to construct roads. Address County Comms.

W. Va., Ranson.—City will issue \$8000 for municipal building and street improvements; C. H. Smith, official in charge.

W. Va., West Union.—Doddridge county, West Union, Central and Grant Dists., is reported to vote about Mch. 1 on \$200,000 bonds to construct roads. Address County Comms.

W. Va., Kingwood.—Preston county, Kingwood Dist., voted \$160,000 bonds for road construction; added to \$284,000 bonds recently voted by Portland Dist., provides \$444,000 for building highways; some of concrete and some of macadam construction; nearly 50 mi. of hard roads for the two districts; County Court will probably let contracts in March; E. C. Everly, Clerk County Court.

SEWER CONSTRUCTION

Ala., Birmingham.—City will construct sanitary sewers at East Thomas; estimated cost \$8000; Julian Kendrick, City Engr.

Fla., West Palm Beach.—City, A. M. Lopez, Clerk, will receive bids Feb. 24 to complete improvements to sanitary sewerage system; J. B. McCrary Co., Engr., Third National Bank Bldg., Atlanta, Ga. (See Miscellaneous Construction. See Machinery Wanted—Seawall, etc.)

La., New Iberia.—City, H. S. Sealy, Mayor, contemplates expending about \$80,000 to construct sewer system; X. A. Kramer, Engr., Magnolia, Miss.; \$90,000 bonds lately noted to be voted Mch. 2. (See Machinery Wanted—Sewer Materials.)

Md., Govans.—Baltimore County Comms. Towson, received report from Ezra B. Whitman of Greiner & Whitman, 1319 Fidelity Bldg., Baltimore, on construction of sewer system, estimating cost at \$91,000 to \$108,000; estimates cost of sewers at \$61,518.71 and of disposal plants from \$30,000 to \$47,000. (Noted in July.)

Miss., Laurel.—City will issue \$5000 bond issue for sewer construction. T. G. McCallum, Mayor.

Mo., Liberty.—City is having plans prepared for storm sewer in South Lightburn St. from Mill to Franklin St.; cost \$20,000. Address The Mayor.

Okl., Batesville.—City will construct sewers in Sewer Dist. No. 3. Address The Mayor.

Okl., Ollton.—City is reported to vote Jan. 28 on \$10,000 bonds to construct sanitary sewer system. Address The Mayor.

Tex., Yorktown.—Business Men's Club interested in plan to construct sewers.

W. Va., Fairmont.—City is reported to vote, probably in Mch., on \$100,000 bonds to extend sewers and streets. Address The Mayor. (See Road and Street Work.)

TELEPHONE SYSTEMS

Okl., Afton.—United Telephone Co., capital \$50,000, Incptd. by H. W. Hubenthal, T. D. Trickey, F. S. Miller and others.

Tenn., Cleveland.—Cumberland Telephone & Telegraph Co. (main office, Louisville, Ky.) let contract E. M. Pratt of Chattanooga to erect telephone exchange costing \$10,000; also expend \$40,000 additional to install common battery system and in rebuilding systems; exchange building to be 35x40 ft. 2-story semi-fireproof structure, ornamental pressed brick, etc. (Lately noted.)

Tenn., Boykins.—Boykins Telephone Co., capital \$5000, Incptd.; E. M. Harris, Prest.; Kathryn T. Harris, Secy.-Treas.

TEXTILE MILLS

Ala., Mobile—Sweaters.—J. F. Carter, Jr., contemplates establishing plant to manufacture woolen sweaters and sweater-coats; has not decided on location.

Ga., Hampton—Cotton Yarn, etc.—Henderson Mfg. Co. organized; A. J. Henderson, Prest.; A. M. Henderson, Secy.-Treas.; consolidates present cotton-yarn mill, underwear knitting mill and bleachery; equipment includes 4000 ring spindles, 80 knitting machines, etc. (Noted in Jan. Incptd. with \$200,000 capital.)

Mo., St. Louis—Cordage and Bagging.—American Mfg. Co. will erect 1-story factory to cost \$11,500 at 1026 S. 11th St.; also alter factory and offices at 1032 S. 11th St., to cost \$2000.

Mo., St. Louis—Bleachery.—Lowell Bleachery, Lowell, Mass., increased capital from \$400,000 to \$600,000; will erect building to cost \$60,000; 157x100 ft.; 3 stories; brick and wood mill construction; open bids Feb. 1; install machinery to bleach and finish cotton goods. (Lately noted to build bleachery, etc.)

N. C., Conover—Knit Underwear.—P. E. Ishenower, A. L. Shuford and others plan to establish men's underwear knitting mill; capital \$10,000; have building. (See Machinery Wanted—Knitting Equipment.)

N. C., Cornelius—Cotton Yarn.—Gem Yarn Mills will increase capital by \$30,000.

N. C., Leakesville—Knit Goods.—Thread Mills Co., Spray, N. C., will build knitting mill; advises Manufacturers Record that further information is not ready for publication. (Lately reported to build.)

N. C., St. Pauls—Cotton Yarn.—St. Pauls Cotton Mill will build addition and add 5000 spindles; has 7000 spindles.

N. C., Wadesboro—Silk.—Geo. W. Huntley is reported interested in plan of New York manufacturers to establish silk mill.

S. C., Westminster—Cotton Cloth.—Oconee Mills Co. will install 40 automatic looms; purchased this machinery.

WATER-WORKS

Ga., Acworth.—City votes Feb. 15 on \$5000 bonds for improvements to water-works and electric-light plant. P. O. McLain, City Clerk.

Ky., Mt. Sterling.—City contemplates constructing water-works. Address The Mayor.

La., Opelousas.—City let contract Layne & Bowler Co. of Rayne, La., to drill deep well; lately noted. (See Electric Plants.)

Md., Brunswick.—Water Commission petitioned Legislature for authority to issue \$75,000 bonds to improve water-works.

Mo., Slater.—Alton Slater Water-works Co., capital \$110,000, Incptd.; will construct water-works.

Mo., Mount Vernon.—City will extend water-works; will vote on \$5000 bonds; engaged Albre C. Moore, Engr., Joplin, to prepare plans and supervise construction.

Okl., McAlester.—City Comms. have not definitely determined to construct dam across Wild Horse Creek, etc.; contemplate providing this dam with conduit, estimated cost being \$150,000; A. H. Kndrick, City Engr. (Lately noted.)

Okl., Ollton.—City is reported to vote Jan. 28 on \$25,000 bonds for water-works. Address The Mayor.

Okl., Ringling.—City will vote upon issuing bonds to construct water-works; address Board of Trustees. (Noted in December as conferring with engineers relative to providing artesian water supply, constructing water-works, etc.)

Okl., Shamrock.—City will construct water system; lay 6-in. pipes through city; supply from wells 14 ft. in diam. and 30 ft. deep; has ordered engine and centrifugal pump. Address The Mayor.

Tex., Galveston.—City will drill three 12-in. wells and equip with necessary pumping apparatus to pump into city's receiving tank at Alta Loma 3,000,000 gals. water daily; bids until Feb. 10; John D. Kelley, City Secy. (See Machinery Wanted—Well Drilling.)

Tex., Jourdanton.—City issued \$30,000 warrants for purchase of locally-owned water and light plant. Address The Mayor.

Tex., Lampasas Springs (not a postoffice), Gulf, Colorado & Santa Fe Ry., F. Merritt, Ch. Engr., Galveston, is having plans prepared by its engineering department for \$15,000 dam to be constructed across Brown's Creek near Lampasas Springs, Mills county; length proposed ¼ mi.; height to vary from 25 to 30 ft.; capacity 300,000 gals.; spillway over which surplus water will pour when lake is filled will be from 250

to 300 ft. long; dam is to insure adequate fresh water for general needs of railroad in that section and for engines on Lampasas branch.

Tex., Lockhart.—Citizens' Water, Light & Power Co. retained Henry Exall Elrod, Southwestern Life Bldg., Dallas, Tex., to design water-works, electric-light and ice plant.

Tex., Trinity.—Thompson Bros. Lumber Co. plans to build water system for 500,000 gal. capacity 24 hours; install electrically-driven pump, 15,000 ft. 8 or 12-in. wood pipe, etc. (See Machinery Wanted—Piping; Pump.)

W. Va., Madison.—City, H. W. B. Mullins, Mayor, will expend \$12,000 (bonds authorized) to install water plant; details not decided.

WOODWORKING PLANTS

Ark., Fayetteville—Staves.—Geo. A. and E. G. Soule are reported to build factory with daily capacity 500 barrel staves.

Ark., Marshall—Barrel Materials.—Leslie Ice, Lighting & Power Co. changed name to Mays Mfg. Co.; will add manufacture of barrel materials.

Mo., St. Louis—Automobile Delivery Bodies.—Riehling Carriage & Wagon Co., 94-96 N. Broadway, leased 5-story-and-basement warehouse at 509 N. Main St.; will remodel building and equip to manufacture automobile delivery bodies.

Mo., Chillicothe—Gun Stocks.—Gun Stock Mfg. Co., capital \$25,000, Incptd. by O. A. Myers, Geo. W. Williamson and Wm. J. Morris. (W. J. Morris noted to build gun-stock factory.)

N. C., Newbern—Barrels and Staves.—M. C. McIver of Columbia, S. C., and R. L. McLean of Maxton, N. C., contemplate building barrel and stave factory.

S. C., Columbia—Veneer.—Carolina Veneer Co., capital \$125,000, Incptd. by J. F. Kocha and G. A. Guignard.

Tenn., Elizabethon—Flooring and Parquetry.—Wm. S. Whiting will double capacity of plant; install new machinery, electric motors, etc., cost \$10,000, for increased manufacture of oak and maple flooring; present capacity of 300,000 ft. 13x16 flooring, 150,000 ft. 5x16 parquet squares and 200,000 ft. 5x6 parquet strips, to be increased 50 per cent; drykilns capacity to be doubled, increasing to 300,000 ft.

Tenn., Portland—Handles.—Leathers Handles Co., Dickson, Tenn., is reported to establish branch factory; purchased machinery.

Va., Lynchburg—Woodenware.—Lynchburg Woodenware Corp., capital \$25,000, chartered; R. P. Thornhill, Prest.; E. O. Strange, Secy.

Va., Norfolk—Barrel Hoops.—Louis Royster, 26 Alconquin Hotel, interested in plan to establish truck-barrel-hoop factory. (See Machinery Wanted—Barrel-hoop Machinery.)

W. Va., Keyser—Barrels.—Wm. Ilser Sons Co., Cumberland, Md., will build factory with annual output 50,000 barrels.

FIRE DAMAGE

Ala., Camden.—B. Griff's store; G. T. Danney's store; Charleston & McConnell's building; L. H. Hart's building; W. J. Dumas' barber shop; loss \$25,000.

Ala., Oneonta.—L. B. Shelly's grocery store; Oneonta Lunch Room; O. F. Stacey's office; Merchants' Bank; loss \$5000.

Ala., Jasper.—Walker County High School; loss \$20,000. Address County Comms.

Ala., Opelika.—Farley Oil Co.'s cottonseed-oil mill; estimated loss \$55,000.

Ark., Wilmet.—J. Y. Mann's store.

Fla., Carrabelle.—Carrabelle Iron Works.

Fla., Dade City.—A. W. Meredith's sawmill; loss \$1000.

Fla., Tampa.—Tampa Fertilizer Works; loss \$35,000; owner, Interstate Chemical Corp., 255 5th Ave., New York.

Ga., Arnoldsburg.—Public School. Address School Trustees.

Ky., Louisville.—Old Kentucky Distillery Co.'s dryroom; loss \$4000.

Ky., Pineville—Louisville & Nashville R. R. Co.'s freight depot (W. H. Courtenay, Ch. Engr., Louisville); Ike Mills' blacksmith shop; J. J. Gibson's building; Frank Amos' rooming-house; total loss \$20,000.

Ky., Louisville.—Wm. V. Hambleton's bungalow at 1615 Edgefield Ave.; loss \$500.

Ky., Tompkinsville.—Public School; loss \$400. Address School Trustees.

La., Grayport.—W. B. Parker's store, loss \$3000; H. G. Anderson's store, loss \$4000.

La., Crowley.—Lawson & Nelson's planing mill; loss \$1000.

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Md., Fairfield.—Royster Guano Co.'s con-
centration building; loss \$60,000.

Miss., Kosciusko.—J. L. Hammond's store,
loss \$2000; Kosciusko Courier printing plant,
loss \$1000.

Mo., St. Louis.—Glasner & Barzen's building,
owned by heirs of Geo. Huling, loss \$40,000;
Spangler Bldg., loss \$20,000, building owned
by C. J. Schmelzer, loss \$40,000.

N. C., Goldsboro.—Judge F. A. Daniels'
residence.

N. C., Redwood.—Redwood Lumber Co.'s
plant.

N. C., Weldon.—Weldon Lumber Co.'s 6
drykilns and lumber at Mill No. 1; loss
\$40,000.

N. C., Wake Forest.—Wake Forest College
dormitory; Dr. Potent, Prest.

Okla., Drumright.—C. K. Lewis' building;
H. L. Cohen's tailoring establishment;
Clinger's Cafe; Candy Kitchen; Western
Supply Co.; store; D. H. Gillespie's store;
Brawley's Cleaning Establishment, and other
buildings.

S. C., Barnwell.—M. E. Black's residence
on Academy St.

S. C., Rock Hill.—W. J. Orr's residence.

S. C., Sumter.—T. D. DuBose's dwelling.
S. C., Latta.—S. T. Atkinson & Co.'s store.
S. C., Lexington.—S. Preston George's resi-
dence.

Tex., Fort Worth.—Fort Worth Boiler
Works; loss \$15,000.

Tex., Garrison.—A. C. Irvin's residence.

Tex., Grand Prairie.—Kingsley & Allen's
gas; loss \$16,000.

Tex., Huntsville.—C. G. Barrett's livery
stable.

Tex., Memphis.—Memphis Compress Co.'s
plant and 3500 bales cotton; loss \$150,000.

Tex., Terrell.—East Fork Academy in Mark-
Out Community.

Tex., Vernon.—Kell Milling Co.'s grain ele-
vator.

Va., Alexandria.—Warehouse owned by
Mrs. F. S. Harper; loss \$10,000.

Va., Alexandria.—Herfurth Bros.' Artificial
Stone Works; loss \$5000.

Va., Suffolk.—Nansemond Truck Package
Co.'s drykilns.

WRECKED BY EXPLOSION

Okla., Cleveland.—Merchants' Hotel.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ark., Little Rock.—J. O. Gunter will erect
apartment, store and lodge building. (See
Stores.)

D. C., Washington.—Harry Wardman has
plans by A. M. Schneider to erect 3-story
brick apartment-house at 1725 T St. N. W.;
cost \$30,000; construction by owner.

D. C., Washington.—Harry Wardman, 1430
K St. N. W., has plans by A. M. Schneider
Co. for apartment-house at 17th and Church
Sts. N. W.; 6 stories; 95 suites from 2 to 4
rooms and bath; fireproof; cost \$400,000.

Ga., Atlanta.—Lucien L. Knight plans to
erect apartment-house on Highland Ave.;
twins buildings; 3 stories; cost \$75,000.

Ga., Macon.—Mrs. Emily Cunningham has
plans by Curran R. Ellis, Macon, to remodel
frame residence for apartment-house; 4
suites; metal roof; tile bathroom; cost
\$4000; lets contract in about 30 days.

Md., Baltimore.—C. Warner Stork, Rocham-
pion Apartments, Charles and Franklin
Sts., acquired Negary property at Charles
St. and University Parkway and contem-
plates erecting apartment-house.

Md., Baltimore.—Philemon W. Hemsley
has plans by John R. Forsythe, 232 St. Paul
St., Baltimore, for 3-story frame apartment-
house on Harford Ave.; 30x75 ft.; cost
\$10,000.

Mo., St. Louis.—R. M. Smith will erect 2-
story tenement-house at 5507 Idaho St.; cost
\$3000.

Mo., St. Louis.—Josephine Sangulnet will
erect 2 two-story tenements at 3962-66 McRae
St.; cost \$10,000.

Mo., St. Louis.—Francis Wyland Building
& Realty Co. will erect apartment-house on
Laurel Ave. north of Berlin Ave.; 32 suites
of 2 rooms; mat brick and reinforced
concrete; fireproof; English basement; garage
in basement; H. C. Martin, Archt., St. Louis.

Mo., St. Louis.—Wm. H. Leahy will erect
11 double flats on Kingsbury Pl.; each to
contain four 3-room suites; cost \$88,000; also
erect 10 bungalows at 2515-29 Alcott Ave.

Okla., Ardmore.—J. H. Poulter & Sons
have plans by C. S. Curtis, Paris, Tex., for
apartment-house lately noted; 88x92 ft.;
brick walls; composition roof; wood floor;
gas heat; city lighting; cost \$25,000; date of
opening bids not determined. Address J. H.
Poulter, Ardmore. (See Machinery Wanted—
Building Material; Face Brick; Plumbing;
Floor Scraper; Roof.)

Tenn., Nashville.—Dr. A. S. Sharber will
erect apartment house at Hillsboro Rd. and
Highland Ave.; 12 four and five-room suites;
3 stories; Thos. W. Gardner, Archt., Nash-
ville.

Tenn., Nashville.—H. E. Sexton is having
plans prepared by Thos. W. Gardner, Nash-
ville, for apartment-house at Hillsboro Rd.
and Highland Ave.; 3 stories; 8 five-room
suites.

Tex., Dallas.—Walter O. Siler will rebuild
burned apartment-house on Rawlins St.;
fireproof; composition roof; 10 rooms; cost
\$5000. (Lately reported burned at a loss of
\$7500.)

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Md., Baltimore—Police Station.—Baltimore County Comr., Towson, Md., will erect police station at Canton; brick; 2 stories.

Md., Baltimore—Library.—City will erect Enoch Pratt Branch Library at 26th and Wolfe Sts.; cost \$20,000; Otto G. Simonson, Archt., Maryland Casualty Tower Bldg., Baltimore.

Md., Salisbury—Engine-house.—City will request Legislature for authority to issue \$10,000 bonds to erect engine-house in East Salisbury and purchase fire engine.

Tex., San Benito—Firehouse.—City will erect 2-story brick fire station. Address The Mayor.

COURTHOUSES

Tex., Coldspring.—San Jacinto county, Wm. McMurray, Judge, voted \$50,000 bonds to erect courthouse. (Previously noted to erect 3-story-and-basement fireproof building according to plans by Lane & Dowdy, Archts., Houston.)

Okl., Oklahoma City.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids Mch. 13 to remodel postoffice and courthouse. (See Government and State.)

Tex., Lubbock.—E. R. Haynes, County Judge, receives bids until Mch. 8 to erect courthouse; also for steam heating; 3 stories; 80x100 ft.; concrete foundation; brick bucking and stone facing for wall construction; reinforced concrete floors, tile partitions and cut-stone exterior finish; cost about \$100,000; Rose & Peterson, Archts., Kansas City, Kans.; plans and specifications at office of Sam T. Davis, County Clerk. (Previously noted.)

Tex., San Diego.—Duval County Comr., will soon let contract to erect 2-story courthouse; cost \$60,000. (Previously noted to have sold \$65,000 bonds.)

Va., Grundy.—County Comr., have plans prepared by Milburn, Heister & Co., Union Savings Bank Bldg., Washington, D. C., to prepare plans for courthouse; fireproof floors; steam heat; plans ready about Mch. 1; cost \$45,000.

W. Va., Martinsburg.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids Feb. 29 to alter postoffice and courthouse. (See Government and State.)

DWELLINGS

Ala., Birmingham.—Mrs. B. W. Trigg, 24th St. and Palmer Ave., will erect 2 one-story frame dwellings; cost \$3800.

D. C., Washington.—Shannon & Luchs will erect two 2-story frame dwellings at 1217-19 Gallatin St.; cost \$8000; A. E. Landvolgt, Archt., 713 14th St. N. W.; construction by owners.

D. C., Washington.—B. H. Gruver has plans by L. T. Williams, 1389 F St. N. E., to erect four 2-story brick dwellings at 1325-1331 Potomac Ave. S. E.; cost \$9000.

D. C., Washington.—D. J. Partello, 4208 St. N. W., has plans by Merrill C. Vaughn, Woodridge, D. C., for 2 two-story frame dwellings at 732-734 Varnum St. N. W.; cost \$6500.

D. C., Washington.—D. J. Dunigan, 220 Bond Bldg., has plans by Fred B. Pyle, 606 S Evans Bldg., Washington, for 3-story brick dwelling at 2319 Wyoming Ave. N. W.; cost \$22,500.

D. C., Washington.—Shannon & Luchs, 713 14th St. N. W., has plans by Geo. T. Santmyers, 216 Kenos Bldg., for 2 two-story brick dwellings at 1221-1223 Gallaton St.; cost \$10,000.

D. C., Washington.—Harry Wardman, 1433 K St. N. W., has plans by A. M. Schneider Co., for dwelling at 1020 16th St. N. W.; 3 stories; brick and stone; cost \$35,000.

D. C., Washington.—John H. Hewson has plans by Clarke Waggoner, 1211 Connecticut Ave. N. W., to remodel residence at 1533 New Hampshire Ave.; cost \$5000.

D. C., Washington.—W. C. Blundon, 15 Rhode Island Ave. N. W., will erect 3 dwellings at 1307-1311 Fairmont St. N. W.; 2 stories and attic; colonial design; 17x52 ft.; 6 rooms and reception hall; steel skeleton; tapestry brick fronts; hardwood floors; L. Williams, Archt., Washington; construction by owner.

Fla., Jacksonville.—Eagle Film Co. is erecting 2 bungalows in Eagle Film City.

Fla., St. Augustine.—Theo. B. Pomar is reported to erect residence.

Fla., St. Petersburg.—Mrs. Cleo Waterhouse, Chattanooga, Tenn., is reported to erect residence in Bungalow Town.

Fla., Tampa.—H. L. Pierce of Export Terminal Co. and American Phosphate Co. will erect dwelling at Haven-Beach-on-the-Gulf.

Fla., Tarpon Springs.—Fred Jackson will erect 7-room dwelling.

Fla., Tampa.—Paul Gilmore of National Film Corp. of America, 504½ Franklin St., will erect bungalow.

Ga., Atlanta.—Peters Land Co. will erect number of residences.

Ga., Atlanta.—Dr. C. E. Boynton will expend \$35,000 to erect dwelling on Habersham Drive.

Ga., Atlanta.—Brutus Clay will erect residence on Wesley Ave.

Ga., Atlanta.—H. F. West, 218 Atlanta National Bank Bldg., of A. J. & H. F. West Realty Co. will erect residence on Wesley Ave.; 2 stories; tile or slate roof; cost \$8000; Morgan & Dillon, Archts., Atlanta; bids opened about Mch. 1.

Ga., Griffin.—John H. Ward has plans by Beck-Huggins Co., Griffin, to erect residence; 2 stories.

Ga., Griffin.—C. W. Slaton will erect residence.

Ga., Macon.—Orville A. Park has plans by P. E. Dennis, American National Bank Bldg., Macon, for residence; brick; metal roof; hardwood floors; cost \$10,000; will soon receive bids.

Ga., Newton.—R. L. Hall has plans by Thos. W. Campbell, Chronicle Bldg., Augusta, to erect residence; 69x74 ft.; frame and brick; tin shingle roof; wood porch columns with composition cap; electric-light plant; electric fixtures; 3 tile baths; cost \$15,000; owner receives bids.

Ga., Savannah.—Garrard Haines will erect residence.

Ga., Savannah.—Mrs. Mary Brown will erect a 1-story frame house at 2d Ave. and 48th St.; metal roof.

Ga., Savannah.—T. W. Holly will erect a 2-story frame dwelling on Joe St.; metal roof.

Ga., Waynesboro.—W. L. Mills has plans by Thos. M. Campbell, Chronicle Bldg., Augusta, for bungalow; frame and brick; cypress shingle roof; electric fixtures; tile bath; brick porch columns; cost \$3000; owner receives bids in February.

Md., Baltimore.—Geo. R. Morris, Gunther Bldg., purchased 29 acres of land on Garrison Ave. and will develop for dwellings; will ultimately erect 120 cottages; 2½ stories; cost \$5000 to \$7000 each.

Md., Baltimore.—Maryland Realty Co. has plans by Stanislaus Russell, 2900 Clifton Ave., for 28 two-story detached brick dwellings on Garrison and Dalrymple Aves.; 16x80 ft.; ordinary construction; slate and slag roof; steam heat; gas and electric lights; construction by owner. (Lately noted.)

Md., Baltimore.—George Klein, 2909 Belmont Ave., has plans by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for 14 two-story brick dwellings; 14x50 ft.; ordinary construction; slag roof; steam heat; gas and electric lights; cost \$30,000; construction by owner, who may be addressed.

Md., Baltimore.—Globe Realty Co., Poplar Grove and Winchester Sts., has plans by Stanislaus Russell, 2900 Clifton Ave., for 15 two-story brick dwellings on Laurens St. between Bloomingdale Rd. and Longwood St.; 14x45 ft.; ordinary construction; slag roof; hot-air heat; gas and electric lights; cost \$30,000; construction by company, which may be addressed. (Lately noted.)

Md., Baltimore.—Laurence M. Buck, 6 Merriman's Court, University Parkway, is having plans prepared by Mott & White, 322 N. Charles St., for residence near Guilford.

Md., Baltimore.—E. J. Gallagher Realty Co., 919-20 Munsey Bldg., will erect 123 dwellings in eastern section of city; 2 stories; porch fronts; brick; hot-water heat; ordinary and hardwood floors; 40 on Ellwood Ave., 41 on Robinson St. and 42 in same section; 12x44 ft. and 13x44 ft.; cost about \$158,000; E. J. Gallagher, Jr., Archt., Munsey Bldg., Baltimore; construction by owner.

Md., Baltimore.—Northwestern Real Estate Co., 45-46 Gunther Bldg., has plans by Geo. R. Morris, Gunther Bldg., to erect cottage on North Rd. near Cedar Rd.; 1½ stories; frame; cost \$3000.

Md., Baltimore.—Frank Novak Realty Co., 741 N. Kenwood Ave., acquired all vacant property between Clifton Park and 26th St., Washington St. and Collington Ave., and will spend about \$350,000 to erect dwellings; 2 stories; brick; hot-water and hot-air heating plants; G. & Callis, Archts., 2055 Kennedy Ave., University Parkway; colonial

type; 2½ stories; 60x55 ft., with wing 25x20 ft.; slate or tile roof; hot-water heat; electric lighting; brick; cost \$35,000; bids opened in about 30 days. Address architect.

Md., Chattaloochee.—Loring A. Cover, 800 Equitable Bldg., Baltimore, Md., will erect 2½-story brick addition to residence; Smith & May, Archts., 113 Calvert Bldg., Baltimore.

Md., Hamilton.—Jas. K. Culver will erect 3 dwellings on Goodwood Rd. and Traymore Rd. for Oliver C. Downs, A. M. Clark and Mr. Fitzpatrick; 2½ stories; semi-detached; shingle exterior; slate roof; sleeping porches; cost \$3500 each.

Md., Mt. Washington.—Webb & White, Title Bldg., Baltimore, will erect bungalow on Oaksley Rd., Hilltop Park; hollow tile and stucco; site 52x152 ft.; cost about \$4000.

Mo., St. Louis.—Wm. H. Leahy will erect 10 bungalows. (See Apartment-houses.)

Mo., St. Louis.—Elise K. Schneider will erect 2-story dwelling at 5908 DeGiverville St.; cost \$4000.

Mo., St. Louis.—Saun Architects, St. Louis, will erect 2 residences in Ames Pl.; English domestic and colonial styles; hardwood floors and interior finish; paneled wainscoting; plans by owners.

Mo., St. Louis.—Chas. Muell will erect 40 bungalows on Humphrey St.; initial operation of 10 to begin at once; total investment, including ground, \$208,000.

N. C., Asheville.—Jacob S. Hante will erect dwelling on Charlotte St.; cost \$3000.

N. C., Asheville.—Dan Duck will erect dwelling on Penland St.; cost \$3000.

N. C., Asheville.—W. H. Shaffner, 269 Mountford Ave., will erect dwelling; cost \$3000.

Okl., Tulsa.—R. M. Darnell will erect residence at Maple Ridge; brick and stone; cost \$7000.

S. C., Greenville.—Mrs. M. E. Davis will erect dwelling on Augusta St.

S. C., Greenville.—Mrs. W. B. Wilson will erect 5-room cottage on Croft St.

Tenn., Nashville.—Belle Meade Land Co. is having plans prepared by C. K. Colley, Nashville, for residence at Belle Meade.

Tex., Austin.—J. R. Reed will erect residence; 2 stories; wood; cost \$4700; Roy L. Thomas, Archt., Austin.

Tex., Bay City.—Bay Stock Farms Co., W. H. Ramsay, Mgr., will erect residences, barns, silos, sheds and other buildings to cost \$22,000; cement sidewalks; construction begun.

Tex., Fort Worth.—W. A. Thomas will repair residence at 508 S. Ballinger St.; cost \$3000.

Tex., Houston.—H. M. Garwood will erect residence on Montrose Blvd.; brick; green tile roof; 12 rooms and 4 baths; hardwood finish throughout.

Tex., Houston.—Frank Andrews will erect residence; brick and tile; construction begins in about 30 days.

Tex., Houston.—D. & U. S. Frosch will erect 5 five-room dwellings at Bear and Gregg Sts.; cost \$3000.

Tex., Houston.—E. C. Smith will erect 3-room residence; cost \$5000.

Tex., Paris.—Mrs. B. S. High has plans by C. S. Curtis, Paris, for dwelling; 2 stories; brick veneer; clay tile or composition shingle roof; wood floors; hot-water heat; cost \$10,000; bids opened March 1.

Tex., Paris.—Judge L. L. Hardison will erect 2-story residence; brick veneer; clay tile or composition shingle roof; wood floor; hot-water heat; cost \$10,000; C. S. Curtis, Archt., Paris; bids opened March 1. (See Machinery Wanted—Building Material; Roofing; Tile; Face Brick.)

Tex., San Antonio.—C. H. Williams will erect two 5-room dwellings on Wilmington Ave.; total cost \$3000.

Tex., San Antonio.—D. S. Combs will erect 13-room dwelling in Kings Highway; cost \$17,000.

Tex., San Antonio.—J. H. Waymouth will remodel dwelling on W. Mistletoe Ave.; cost \$3500.

Va., Hopewell.—K. C. Sidbury purchased tract of land on Appomattox River and is reported to erect dwelling.

Va., Richmond.—O. J. Davis will erect 3 two-story brick dwellings on Floyd Ave.; cost \$9000.

Va., Richmond.—Atlantic Construction Co. will erect 2 two-story brick dwellings on Oakwood Ave. between Stuart and Lee Sts.; cost \$8000.

Va., Richmond.—A. J. Seelman will erect 3 two-story frame dwellings on Hazelhurst Ave.; cost \$4500.

Va., Richmond.—Julia R. Walford will erect 2-story frame dwelling on Moss Ave.; cost \$5000.

Va., Richmond.—C. C. Hitt will erect two 2-story frame dwellings on Rogers St. between Kendall and Miller Aves.; cost \$400.

Va., Richmond.—Mrs. Emma D. Sherwin will erect a 2-story brick dwelling on Boulevard yard between Main St. and Floyd Ave.; cost \$7000.

GOVERNMENT AND STATE

Md., Indian Head—Government Building—Bureau of Yards and Docks, Navy Dept., Wm. M. Smith, Acting Chief of Bureau, Washington, D. C., opens bids Feb. 19 to alter building No. 17, Naval Proving Ground.

N. C., Shelby—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice; Chandler & Campbell, Chattanooga, are lowest bidders at \$47,600. (Noted in Dec.)

Okl., Oklahoma City—Postoffice and Courthouse.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids Feb. 29 to alter postoffice and courthouse; also at same time for electric passenger elevator and for sewage-disposal system; drawings and specifications obtainable from custodian at Oklahoma City or office of Supervising Archt.

W. Va., Martinsburg—Postoffice and Courthouse.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids Feb. 29 to alter postoffice and courthouse; also at same time for electric passenger elevator and for sewage-disposal system; drawings and specifications obtainable from custodian at Martinsburg and Mr. Wetmore at Washington. (See Machinery Wanted—Elevator; Sewage-disposal System.)

HOSPITALS, SANATORIUMS, ETC.

Ark., Blytheville.—City, Mr. Ledmore, Mayor, is considering erecting hospital.

N. C., Raleigh.—Albert Anderson, Supt. State Hospital, receives bids until Feb. 10 to erect nurses' home of ordinary construction and fireproof receiving building; plans and specifications obtainable from Frank K. Thompson, Archt., Raleigh, call for buildings 54x158 and 73x150 ft.; slate and tin roof; steam heat and electric light from central power plant.

S. C., Spartanburg.—Steady Hospital Co. opens bids Feb. 15 to erect hospital on E. Main St.; fireproof; four stories and basement; reinforced concrete; steam heat; cost \$40,000; L. D. Proffitt, Archt., 401 Chapman Bldg., Spartanburg. Address Archt.

Tenn., Lebanon.—F. J. Sanders is reported to erect sanitarium; cost \$45,000.

Tenn., Memphis.—Baptist Memorial Hospital will erect second of three buildings originally planned; 38x120 ft.; 7 stories; concrete; concrete floors; steam heat; cost \$125,000; John Galsford, Archt., Memphis, Tenn.; Perry C. Wilkes, Supt. Address E. A. Jennings of Jennings-Stark Furniture Co., Main St., Memphis. (Lately noted.)

Tex., El Paso.—Providence Hospital is reported having plans prepared for building to replace present structure; fireproof; 5 stories; cost \$150,000. Address The Superintendent.

HOTELS

Fla., Defuniak Springs.—W. B. Harbeson acquired controlling interest in DeFunak Hotel and will improve building; install steam heat; electric lighting; additional bathrooms.

Md., Blue Mountain (not a P. O.)—Blue Mountain Hotel Co. Incptd. with capital stock of \$300,000; Jos. Castelberg, Pres., W. Baltimore St.; C. F. Stewart, V.-P., Light St.; Ernest Roberts, Secy-Treas.; Calvert Sts.; all of Baltimore; company purchased site of old Blue Mountain House with 53 acres of land and will erect fireproof hotel; 4 stories; 250 rooms; 100 private bathrooms; natural stone construction; electric lighting; electric elevators; mechanical heaters and filters, etc.; will construct swimming pool 50x50 ft., lined with tile; repair present buildings, including chapel, bowling and billiard room and garage; construct golf links, etc.; cost \$20,000; architect not selected and other details not determined; John J. Gibbons, Mgr., care Western Maryland Ry., Baltimore. (Previously noted.)

Fla., Miami.—J. Wainwright, Jr., and others plan to erect hotel at Ave. C and 13th St.; 100x95 ft.; 7 stories; tentative plans provide for steel and concrete building; electric elevators; porches, etc. Mr. Wainwright wires Manufacturers Record: "Nothing definite at this time."

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Md., Baltimore.—Southern Hotel Co., Calvert Bldg., is having plans prepared by Otto G. Simonson, Maryland Casualty Bldg., for hotel at Light and German Sts.; 93x148 ft.; 10 stories, basement and subbasement; steel frame; curtain walls; fireproof; marble and hardwood trimmings; Italian renaissance; terra-cotta and brick; top story and cornice of terra-cotta and brick; roof garden; the roof; steam heat; electric light and power plant; granolithic sidewalks and vault lights; electric elevators; 250 rooms; 19 private bathrooms on each floor; cost \$300,000; contract let about Apr. 1. (Lately noted.)

Mo., St. Louis.—John D. Davis contemplates erecting hotel at 9th St. and Washington Ave.

Okl., Ardmore.—Capt. W. H. Whittington has plans by C. S. Curtis, Paris, Tex., for hotel; 87x100 ft.; mill construction; composition roof; wood floors; hot-water heat; remodel elevator; cost \$30,000. (See Machinery Wanted—Building Material; Face Brick; Tile; Metal Ceiling; Plumbing; Heating Plant.)

Tex., San Antonio.—Atlee B. Ayres, Bedell Bldg., San Antonio, is preparing plans for 4-story fireproof hotel; veneered with pressed brick; steam heat; tile floors.

Tex., San Antonio.—T. H. Zanderson is having plans prepared for hotel on S. Flores St.; steam heat; private baths; roof garden; etc.

Tex., Waco.—J. S. Cherry will install cafe and not enlarge hotel, as lately reported.

Tex., Yorktown.—Business Men's Club is promoting organization of company with \$30,000 capital to erect 2-story hotel.

MISCELLANEOUS

Ala., Birmingham—Stable.—Palace Stables Co. will erect stable on 1st Ave. near 23d St.; 2 stories; brick; 100x140 ft.; fireproof; cost \$20,000.

Ala., Birmingham—Shed.—F. & G. Cotton Oil Co. will erect frame shed at 41st St. and 12th Ave.; cost \$3000; also repair shed, same location, cost \$500.

Fla., Orlando—Clubhouse.—Roselyn Club, Miss Margaret Hart, Prest., is reported to erect clubhouse.

Fla., Daytona—Library.—C. A. Young will erect library at Vermont Ave. and Peninsula Drive, Marshall Park.

Ga., Marietta—Clubhouse.—Marietta Golf Club has plans by Alfred Barill, Grant Bldg., Atlanta, to erect clubhouse; 75 ft. long; shingle and rough board exterior.

Mo., St. Louis—Restaurant.—John R. Thompson Co., Chicago, will alter and improve building at 3608 Olive St. for restaurant; Kilstein & Rothmann, Archts., St. Louis.

Okl., Blackwell—Undertaking, etc.—Sharp-Wallace Furniture & Undertaking Co. will erect building for furniture store and undertaking establishment. (See Stores.)

S. C., Spartanburg—Fair.—Spartanburg County Fair Assn. will expend \$4000 for buildings.

Tex., Dallas—Fair.—State Fair Assn. is reported to expend \$38,250 during year for improvements to State Fair Grounds; will provide larger athletic field, construct auditorium for babies, etc.

Tex., Galveston—Amusement.—Casino Amusement Co. will expend \$3000 to repair building at Tremont St. and Boulevard.

RAILWAY STATIONS, SHEDS, ETC.

Fla., Palm Beach.—Florida East Coast Ry. will not erect passenger station as lately reported.

Ky., Pineville.—Louisville & Nashville R. R. Co., W. H. Courtney, Ch. Engr., Louisville, Ky., will rebuild freight depot noted damaged by fire.

Md., Baltimore.—Pennsylvania R. R., Gamble Latrobe, Gen. Agt. at Baltimore, office at Union Station, will erect station near Edmondson Ave. bridge; details not determined.

Md., Tome.—Philadelphia, Baltimore & Washington R. R., J. C. Auten, Prin. Asst. Engr., Wilmington, Del., will erect depot; classic style; waiting-rooms and trainshed under one roof; porch extension; Port Deposit granite construction; sandstone trimmings; red slate roof; wood interior finish; tiled floors; electric lights; steam heat.

Okl., Ardmore.—Gulf, Colorado & Santa Fe Ry., F. Merritt, Ch. Engr., Galveston, Tex., is preparing plans for passenger and freight depot; details not completed.

SCHOOLS

Ala., Jasper.—Walker County Comms. will rebuild high school noted damaged by fire at loss of \$20,000.

Ala., Mobile.—Mobile county voted \$150,000 bonds for rural schools; details not determined. Address Dr. L. W. Roe, Chrmn. School Commission, Van Antwerp Bldg., Mobile. (Lately noted.)

Ark., Morrilton.—School Board will rebuild burned school; 100x150 ft.; brick; steam heat; electric light; cost \$12,000 to \$15,000. Address A. V. Hembree, Morrilton. (Lately noted burned at loss of \$30,000.)

Ark., Texarkana.—Wooten Springs School Dist. voted \$8000 bonds to erect building; 2 stories; brick. Address School Trustees.

S. C., Columbia.—School Board did not let

contract to erect Blossom Street School;

will have plans revised and receive revised bids; J. H. Sams, Archt., Columbia. (Late-

noted.)

S. C., Greenville.—Greenville School Dist. voted \$75,000 bonds for schools; P. T. Payne, Chrmn.; B. E. Greer, Secy. School Board. (Noted in Jan.)

Tenn., Chattanooga.—High School Board is considering erecting building on Central

High School grounds for auditorium to seat

1000, domestic science department, chemical

and science laboratories, etc.; H. K. Allison,

Chrmn. Com.

Tenn., Sevierville.—Sevier County Comms. are reported to erect high school.

Tenn., Morristown.—City receives bids un-

til Feb. 10 to erect school building. Address

The Mayor.

Tex., Brownsville.—City is having plans

prepared by Atlee B. Ayres, Bedell Bldg.,

San Antonio, for two-story-and-basement

fireproof high-school building; outside walls

veneered with pressed brick; terra-cotta

trimmings; pine trim; gravel roof; tile par-

titions; slate blackboards, etc.; also having

plans prepared by Mr. Ayres for two gram-

mar-school buildings; has bond issue of

\$100,000. (Lately noted.)

Tex., El Mott.—Elm Mott School Dist. will

erect school; Geo. Glen, Archt., Fort Worth;

may also let building contract to Mr. Glen.

(Lately noted to be put by County Comms.

for election on \$8000 bonds.)

Tex., Ross.—Ross School Dist. will erect

school lately noted; 98x44 ft.; concrete hol-

low-wall construction; tar and gravel roof;

cost \$10,000; heating, \$300; Edw. H. Reed,

Archt., 1903 Amicable Bldg., Waco, Tex.;

votes Feb. 12 on bond issue. (See Machinery

Wanted—Heaters; Desks; Blackboards.)

Tex., Laporte.—Geo. Van Pelt, Secy. Inde-

pendent School Dist., receives bids until

Feb. 21 to erect school, including heating,

plumbing and electric wiring; furniture,

equipment and seats set under separate con-

tracts; plans and specifications at office of

A. O. Blackwell, Atty., 806 Scanlan Bldg.,

Houston, and Mr. Van Pelt as above.

Tex., San Antonio.—City voted \$800,000

bonds for school; Paul H. Scholtz, Business

Agent, School Board. (Noted in Dec.)

Va., Blacksburg.—Blacksburg School Dist.

will erect high school; 3 stories; 60x100 ft.

ordinary construction; Buckingham slate

roof; mechanical fan system heat; electric

lights; cost \$20,000; G. R. Ragan, Archt.,

Colonial Bank Bldg., Roanoke, Va., who may

be addressed. (Lately noted.)

Va., Lexington.—Virginia Military Insti-

tute, Gen. E. W. Nichols, Supt., will erect

Stonewall Jackson Memorial Institute build-

ing; \$100,000 available.

Va., Portsmouth.—Norfolk County Supervrs.

authorized bond issue of \$45,000 to erect 4

brick school buildings, including South Nor-

folk school of 16 rooms, cost \$40,000; 4-room

building at Pinners Point, cost \$15,000; 2

buildings in Pleasant Grove Dist., cost \$10,-

000 each. (Pinners Point school lately

noted.)

W. Va., Clarksburg.—United Schools Build-

ing Co. will erect school and gymnasium

building; 5 stories; 78½x150 ft.; fireproof;

cost \$150,000; S. W. Ford, Archt., Clarks-

burg; other details not determined; bids

opened in about 30 days. Address J. B. Cat-

lett, Clarksburg. (West Virginia Business

College previously reported to erect this

building.)

W. Va., Covington.—Industrial School and

Farm for Homeless Boys, C. C. Thurber,

Supt., plans to erect three \$5000 concrete

cottages in spring; ultimately plans to erect

administration building, school building,

chapel, dining-room and other structures;

will probably let contract to W. K. Barger,

Lynchburg, Va.; W. R. Burnham, Archt.,

Lynchburg.

W. Va., Industrial.—State Board of Con-

trol, J. S. Lakin, Prest., Charleston, W. Va.,

receives bids until Mch. 1 to erect school

building 140x38 ft.; chapel-room 32x60 ft.;

pressed brick; fireproof floor and roof;

ground-floor walls of salt-glazed brick; sus-

pended ceiling; steel trusses; Bedford lime-

stone trim; composition roof; H. Rus-
Warne, Archt., Charleston; plans obtainable
from State Board of Education. (Noted in
Dec.)

W. Va., Ranson.—School Dist. is reported
to have voted bonds. Address School Trustee.

W. Va., West Liberty.—State Board of
Control, Charleston, will erect normal
school dormitory; 196x40 ft.; 3 stories;
brick; steam or hot-water heat; gas light;
cost \$52,000; John C. Shaw, principal of
school; Fred Farris, Archt., Wheeling, W.
Va. Address State Board of Control. (Noted in December.)

W. Va., Weirton.—School Board, A. A.
McEndree, Secy., has plans by Peterson &
Clarke, Steubenville, O., for school near
Weirton; 2 stories and basement; cost about
\$35,000; probably brick construction. (Late-
ly noted to have voted \$50,000 bonds.)

STORES

Ala., Bessemer.—Bell-Rogers Produce Co.
will erect wholesale building; site 25x140
ft.; 2 stories; brick or concrete.

Ark., Little Rock.—J. O. Gunter lets con-
tract Feb. 5 to erect building at 9th and
Thomas Sts.; basement for apartments;
first floor, stores; second, lodge hall; 50x50
ft.; brick; cost \$10,000; Harry Weston, ar-
chitect, Little Rock.

Ark., Pine Bluff.—Mann-Tankersley Drug
Co. is having plans prepared by M. Selig-
man, Pine Bluff, for 2-story brick building;
C. G. Jones, local manager. (Lately noted.)

D. C., Washington.—Lansburgh & Bro.
have plans by Milburn, Heister & Co., Union
Savings Bank Bldg., Washington, for store
building.

D. C., Washington.—A. C. Mayer of Mayer
Amusement Co., owners of Casino Theater,
is reported promoting erection of store build-
ing at 7th and F Sts.; probably 7 stories;
cost \$350,000.

Fla., Pensacola.—M. J. Elkan will erect
business building on Palafox St.; 100x10
ft.; fireproof.

Ga., Albany.—Estate of S. Farkas will
erect building on Broad St.; 55x70 ft.; fire-
proof; tile roof; cost \$3000; construction by
owner. (Lately noted.)

Ga., Griffin.—Thos. J. Brooks purchased
store at Hill and Solomon Sts.; will re-
model and construct front and provide
offices on second floor; building 32x90 ft.;
fireproof; tin roof; electric lighting; cost
\$20,000; Beck & Higgins, Archt., Griffin; begin
construction about Mch. 10. (Lately noted.)
(See Machinery Wanted—Steam Heating
Plant.)

Ga., Macon.—F. H. Powers is having plans
prepared by Curran R. Ellis, Macon, to erect
3 store buildings at Broadway and 2d St.;
each 2 stories; 22x60 ft.; brick; metal roof;
concrete floors; plate glass; cost \$7500.

Ga., Savannah.—A. L. Tucker will erect
2-story brick store and office building; cost
\$3500.

Ky., Hazard.—Pursifull & Combs will
erect store and office building on Main St.;
41x85 ft.; ordinary construction; J. & M.
Reed, Archt., Hazard. (Lately noted.)

Mo., St. Louis.—Missouri Botanical Assn.
will alter store at 510-14 Washington St.;
cost \$5000.

N. C., Statesville.—Herschell Swann will
erect a store on River Hill Rd. in Cool
Spring township.

N. C., Whiteville.—R. E. Hill is reported to
erect building to replace burned structure.

N. C., Whiteville.—W. J. Benton will erect
building to replace burned structure.

N. C., Whiteville.—J. A. Clark is reported
to erect building to replace burned structure.

N. C., Whiteville.—Powell & Co. are re-
ported to erect building to replace burned
structure.

Okl., Blackwell.—Sharp-Wallace Furni-
ture & Undertaking Co. will erect building
on Blackwell Ave. for furniture and under-
taking establishment; 50x140 ft.; fireproof;
reinforced concrete; gas stoves inserted in
wall, cost \$500; electric lighting, \$100; hand-
power elevator with grip-hoist attachment
to cost \$400; cost without equipment \$18,000;
Cowell & Van Matre, Archts., Wichita,
Kans.; bids opened Jan. 24. (Lately noted.)

Okl., Sand Springs.—W. T. Dalton will
erect 2-story brick business building.

Okl., Sand Springs.—Mrs. Jessie McClell-
land will erect 2-story brick business build-
ing.

Okl., Sand Springs.—Davis Bros. will erect
2-story brick business building.

S. C., Greenville.—W. A. Williams will erect 2-story building on Coffee St.; cost \$325.

Tenn., Lone Mountain.—Payne Bros. will rebuild store lately reported burned; 40x80 ft.; fireproof; tar and gravel roof; furnace; electric light cost \$3000; construction about March 1.

Tenn., Memphis.—G. H. Guthrie will enlarge building at 219-53 Monroe Ave.; cost \$3000.

Tex., El Paso.—Howard, Rankin & O'Fallon estate, St. Louis, has plans by Trost & Trost, El Paso, for business block on S. Oregon St.; 2 stories; 120x120 ft.; brick and frame; lower floor for stores; upper floors for apartments; cost \$40,000.

Tex., Wichita Falls.—F. P. Timberlake,

Decatur, Tex., and J. J. Perkins will erect 2-story business building.

Va., Hopewell.—Underselling Store will erect 2-story building on Railroad Ave.; fireproof; 150x40 ft.; galvanized steel roof. Address The Manager.

W. Va., Parkersburg.—J. J. Crotty, 2d St., will erect store and apartment building. (See Apartment-houses.)

Va., Staunton.—Olin Palmer will erect business building at Mulberry and Wayne Ave.

WAREHOUSES

Tenn., Cleveland.—Cleveland Chair Factory will erect warehouse.

Tenn., Nashville.—Tennessee Oak Flooring Co. will not erect building as lately reported.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Tenn., Nashville.—Charles Cohn let contract to remodel apartment-house at 603 De-monbreun St.

Tenn., Nashville.—Guaranty Construction Co. has contract to erect 3-story 6-family apartment-house at 23d Ave and Elliston Pl.; brick; composition roof; cost \$14,000; Thos. W. Gardner, Archt., Nashville.

Tenn., Nashville.—Bellecourt Improvement Co. let contract to erect apartment-house at Bellecourt and 18th Aves.; 3 stories; 19 apartments; fireproof; low pressure steam heat; tar and gravel roof; electric and gas lighting; cost \$50,000; C. K. Colley, Archt., 33-49 Life & Casualty Bldg., Nashville. (Lately noted.)

Tex., Fort Worth.—S. Rotsky let contract to W. H. Gilmar to erect 2-story brick rooming-house at 1400 Jones St.; cost \$14,000.

Va., Norfolk.—Claude W. Northern has plans by and let contract to A. M. Johnson & Co., 204 Arcade Bldg., Norfolk, to erect 6-family apartment-house at 747 Monticello Ave.; 2 stories; 42x60 ft.; 16 rooms; mill construction; gravel roof; cost \$4000. Address Contrs. (Lately noted.)

ASSOCIATION AND FRATERNAL

Ky., Lexington.—A. B. Jones let contract to Jackson Lumber Co., Lexington, to erect building; 25x56 ft.; stores first floor; lodgerooms above; mill construction; tar and gravel roof; wood and tile floors; cost \$12,000; heating, \$150; J. S. Moore, Archt., Mc-Clellan Bldg., Lexington. Address John V. Moore, Lexington.

Tex., Galveston.—Galveston Council, 787, Knights of Columbus, let contract to Coyle Bros., Galveston, to remodel Crystal Majestic Theater Bldg. for store and lodgerooms; 2 floors 40x120 ft.; 3d floor 30x25 ft.; brick; flat shell roof; gas heat; electric light; cost \$5000 to \$6000; will let subcontracts for electric wiring, plumbing, painting and paper hanging. (Lately noted.)

BANK AND OFFICE

Fla., Ocala—Library.—G. K. & E. M. Williams will erect library building on Oklahoma Ave.; tile roof; electric light; cement sidewalk; Geo. McCoy, Archt., Ocala; construction by owner; cost \$830.

Fla., Tampa.—Bank of Commerce let contract to McGucken & Davidson, Tampa, to erect 2-story brick building; 55x45 ft.; 3 stories on first floor; offices above; cost \$7000; Bonfoey & Elliott, Archts., Tampa.

Ga., Pembroke.—Julius Morgan let contract to A. J. Huggins, Lyons, Ga., to remodel building, enlarge vault, construct offices, etc.; 25x75 ft.; fireproof; tile roofing; cost \$3000; plans by Mr. Huggins. (Noted in January.)

Ky., Louisville.—Second Street Amusement Co. let contracts to erect theater, store and office building. (See Theaters.)

Md., Baltimore.—Public Service Building Co. let contract to J. Henry Miller, Inc., Miller Bldg., Eutaw and Franklin Sts., through Parker, Thomas & Rice, Archts., Union Trust Bldg., Baltimore, to erect building at Lexington and Liberty Sts.; 20 stories; 120x84 ft.; fireproof; exterior granite and terra-cotta; metal window frames, doors and windows; 9 high-speed elevators; forced-feeding ventilation and steam heating; vacuum cleaning system; fire pumps; refrigerating plant to furnish ice water throughout building; estimated cost \$1,000,000. (Contract for steel frame lately noted let to Geo. A. Fuller Co. and for fabricated steel to American Bridge Co., both of New York.)

N. C., Hertford.—Farmers' National Bank has plans by and let contract to J. A. Campbell, Edenton, N. C., to erect bank building;

2 stories; terra-cotta front; white pressed brick; copper cornice; concrete stone columns; galvanized-iron roof; prism and plate glass in front; tile floor in lobby; rift pine floor first story; cost \$6000, exclusive of plumbing and heating, which will be let separately.

Tenn., Nashville.—Fourth and First National Bank let contract to Foster & Creighton Co., Nashville, to erect building on Cole building site; concrete and steel; fireproof; 5 stories; finished in light-colored terra-cotta; faced with Rockwood (Ala.) limestone; granite base; 20-ft. entrance; cost \$230,000; Ludlow & Peabody, Archts., 101 Park Ave., New York; H. H. Hibbs, Nashville, local architect, representing Ludlow & Peabody. (Lately noted to remodel building.)

Va., Clintwood.—Sandy Valley Construction Co., L. C. Smith, Mgr., Praise, Ky., has contract to erect bank and office building; H. M. Miller, Archt., Roanoke, Va.; construction begun.

CHURCHES

D. C., Washington.—Mount Pleasant M. E. Church let contract to W. A. Kimmel, 511 Evans Bldg., to erect 2-story brick building at 3146 15th St. N. W.; main auditorium to seat 300; 70x52 ft.; cost \$18,000; Speiden & Speiden, Archts., 1403 New York Ave. N. W., Washington. (Previously noted.)

D. C., Washington.—Mount Olive Baptist Church let contract to W. A. Kimmel, 511 Evans Bldg., to erect building at 1126 6th St. N. E.; cost \$9000; R. I. Vaughn, Archt.

COURTHOUSES

N. C., Durham.—Enterprise Steam & Hot Water Heating Co., 407 N. Howard St., Baltimore, Md., has contract for heating and ventilating system for Durham county courthouse and jail, for which Geo. A. Fuller Co., Munsey Bldg., Washington, D. C., has general contract at \$221,500; Milburn, Heister & Co., Archts., Union Savings Bank Bldg., Washington, D. C.; Pauly Jail Building Co., St. Louis, contractor for steel work in jail. (Noted in Jan.)

Tex., El Paso.—J. E. Morgan, El Paso, Gen. Contr. for \$500,000 El Paso county courthouse, let following subcontracts: Plumbing, Jas. A. Brennan; wiring, International Telephone & Supply Co.; sheet metal, H. Welsch Co.; all of El Paso; structural iron, Capital Iron Works, Topeka, Kan.; terra-cotta; Northwestern Terra-Cotta Co., Chicago; granite, J. B. Huffman, Fort Worth; reinforcing steel, Colorado Fuel & Iron Co., Denver Col.; paints, Pratt & Lambert, Buffalo, N. Y.; plaster, Acme Plaster Co., St. Louis; brick, Elgin Butler Brick Co., Austin, Tex.; hardware, marble and mill work contracts not yet let; Trost & Trost, Archts., El Paso. (Lately noted.)

DWELLINGS

Ala., Montgomery.—Emil Well let contract to Algernon Blair, Montgomery, to erect dwelling at S. Perry St. and Felder Ave.; 2 stories; Spanish renaissance architecture; exterior finished in gray brick veneer; green tile roof; cost \$30,000.

D. C., Washington.—Geo. Claggett let contract to erect store and dwelling. (See Stores.)

D. C., Washington.—David N. Rust, Jr., let contract to D. W. Tyler to erect 2-story frame dwelling at 904 Mittenhouse St. N. W.; cost \$3000; Macneill & Macneill, Archts., 413 Union Trust Bldg., Washington.

Fla., Jacksonville.—Julius Hirschberg let contract to R. B. Parramore, 119 Laura St., Jacksonville, to remodel 2-story dwelling on May St.; 32x60 ft.; ordinary construction; tin roof; cost \$2400. (Noted in January.)

Fla., Jacksonville.—A. L. Brogden let contract to R. B. Parramore, 119 Laura St., Jacksonville, to erect 2-story frame dwelling on Silver St.; 28x39 ft.; ordinary construction; composition slate roof; cost \$3400; W. Mulford Marsh, Archt., Jacksonville. (Noted in January.)

Ga., Atlanta.—W. P. Francis, 83 Marietta St., general contractor to erect dwelling in Druid Hills for J. G. Dobson, let subcontracts as follows: Mill work, Randall Bros.; stone work, Capitol City Stone Co.; plastering, J. H. George & Sons, all of Atlanta; press brick, Key-James Brick Co., Chattanooga. (Noted in January.)

Ga., Augusta.—Thos. M. Campbell, Chronicle Bldg., let contract to H. C. Van Omer, Augusta, to erect bungalow; 6 rooms; frame and brick; cedar shingle roof; hot-water heat; city lighting; cost \$3000; plans by owner.

Ky., Fleming.—Elkhorn Coal Corp. let contract to Sandy Valley Construction Co., L. C. Smith, Mgr., Praise, Ky., to erect 50 dwellings.

Ky., Hazard.—Blue Diamond Coal Co. let contract to Sandy Valley Construction Co., L. C. Smith, Mgr., Praise, Ky., to erect miners' houses, hotel, etc.

Md., Baltimore.—R. S. Owings let contract to Wellner & Cory, 15 E. Fayette St., Baltimore, to erect residence on Charles St. near 3d; 3 stories; colonial; brick; Oliver B. Wright, Archt., Munsey Bldg., Baltimore.

Md., Baltimore.—Geo. W. Wicks let contract to John C. Clark & Son, 1925 Pennsylvania Ave., to erect five 2-story brick dwellings and one 3-story brick dwelling at Walbrook Ave. and Rosedale St.; cost \$12,500; F. E. Beall, Archt., 306 St. Paul St., Baltimore.

Md., Baltimore.—Lohmuller Building Co., 1735 N. Broadway, will erect number of dwellings on Old Harford Rd., Hamilton; 28x30 ft.; mill construction; slate and asbestos shingle roof; 2 and 1½ stories; 6 and 8 rooms; weatherboard and stucco; porches; steam heat; electric and gas light; cost \$2200 each; G. Bernard Lohmuller, Archt., 1735 N. Broadway; construction by owner. (Hamilton Park Co. lately reported as erecting these dwellings.)

Md., Baltimore.—Mabel M. Krauss has plans by H. H. MacLellan, 407 Builders' Exchange, Baltimore, to erect addition to building at 701 W. Lafayette Ave.; 3 stories and basement; 30x20 ft.; cost \$3000; construction by H. M. Rinehart.

Md., Catonsville.—Alfred W. Gleske, 1113 Munsey Bldg., Baltimore, let contract to Henry A. Nagle, Catonsville, to remodel residence on Edmondson Ave. near Ingleside Ave.; will finish interior with mahogany, etc.; cost \$25,000; Walter M. Gleske, Archt., 65 Gunther Bldg., Baltimore.

Mo., St. Louis.—Henry W. Fix, 2025 E. Fair Ave., let contract to J. F. Rupp Building & Contracting Co., East Warne Ave. and Conde Sts., St. Louis, to erect dwelling; 34x43 ft.; ordinary construction; slate roof; cost \$6000; hot-water heat, \$500; Nolte & Naumann, Archts., Fullerton Bldg., St. Louis. (Lately noted.)

N. C., Asheville.—Gov. Locke Craig, Raleigh, let contract to J. W. Cowan to erect dwelling in Grove Park; 2 stories; 9 rooms; frame construction; shingle roof; cost \$8000; heating, \$100; R. S. Smith, Archt., Asheville. (Noted in Jan.)

N. C., Hertford.—Tim Brinn let contract to J. A. Campbell, Edenton, to erect frame residence on river front.

N. C., Hertford.—T. E. Langston let contract to J. A. Campbell, Edenton, N. C., to erect brick residence on river front; plans by Contr.

N. C., Winston-Salem.—C. L. Carroll let contract to A. H. Walls, Winston-Salem, to erect dwelling on Boulevard; 8 rooms and basement; ordinary construction; cedar shingle roof; steam heat; electric light; cost \$4000; Joel R. Hill, Archt., Winston-Salem. (Lately noted.)

Okl., Tulsa.—W. S. Hall, 202 First National Bank Bldg., let contract to M. L. Frederick, Tulsa, to erect dwelling on Boston Ave.; 26x36 ft.; mill construction; shingle roof; cost \$23500; heating, \$200; electric light; concrete sidewalk, steps and driveway to cost \$150.

S. C., Anderson.—Mrs. Lee G. Holloman let contract to C. M. Guest, Anderson, to erect residence on N. Main St.; bungalow type; stone veneer; wood or tile floors;

electric lighting; cost \$5000; Casey & Fant, Archts., Anderson. Address Contractor. (Lately noted.)

S. C., Charleston.—Dr. Wm. G. Gamble let contract to erect \$5000 residence.

S. C., Spartanburg.—J. F. Floyd let contract to P. J. O. Smith to erect dwelling on N. Church St.; 12 rooms; brick veneer; slate roof.

S. C., York.—Lockmore Cotton Mills let contract to John R. Logan, York, to erect 8 operatives' dwellings.

Tex., Ft. Worth.—Dinie Building Co. has contract to erect brick veneer residence at 236 6th Ave.; cost \$3000.

Tex., Houston.—Murray B. Jones let contract to Fred Heidelberg, Houston, to erect residence; 2 stories; brick; also 2-story garage; cost \$10,000; E. L. Philbin, Archt., Gloucester, Mass.

Tex., Houston.—Edward Sacks let contract to Cottage Construction Co., Inc., Houston, to erect seven 4-room cottages on Dowling and Bell Sts.; mill construction; shingle roof; total cost \$6000; Finger & Bailey, architects, Houston. (Lately noted.)

W. Va., Richland.—Richland Coal & Coke Co. is reported to have let contract to erect 40 dwellings; portion to be erected at 8. Warwood and others at Beach Bottom.

W. Va., Wheeling.—Raymond Foose let contract to J. W. Belts Sons Co., Wheeling, to erect a residence at Birch-Lynn; first floor finished in Circassian walnut and balance in white enamel, with mahogany doors; Guy M. Pogue, Archt., Wheeling.

GOVERNMENT AND STATE

Fla., Pensacola.—Aeronautic Station.—Bureau of Yards and Docks, Navy Dept., Washington, let contract at \$12,979 to S. F. Fulghum & Co., Pensacola, to remodel building No. 52, Navy Aeronautic Station; plans and specifications to be had of Bureau or Commandant of Aeronautic Station at Pensacola. (Lately noted.)

S. C., Columbia.—Statehouse.—State let contract to Geo. W. Muller Bank Fixture Co., Atlanta, subject to approval of and appropriation by General Assembly, to erect rostrum, offices and toilets in House of Representatives; cost \$6294; Wilson & Sonn Payne, Archts., Columbia.

HOSPITALS, SANATORIUMS, ETC.

Tex., Tyler.—City and county let contract to F. S. Sewell, Tyler, to erect hospital lately noted; 4x60 ft.; hollow tile; composition shingle roof; vapor vacuum heating plant; electric lighting; cost \$6000; John Barrow, Contr. for brick and tile; Bothwell & Shaw, Archts., Tyler. (See Machinery Wanted—Heating Plant; Vacuum Cleaner; Sewage Disposal.)

HOTELS

Ky., Hazard.—Blue Diamond Coal Co. let contract to erect hotel, etc. (See Dwellings.)

S. C., Spartanburg.—Acme Plumbing Co., Charlotte, N. C., has contract at \$18,000 for plumbing in 6-story fireproof hotel for which Longest & Tesser Co., Greensboro, N. C., has general contract; cost \$150,000; Chas. M. Robinson, Inc., Archt., Times-Dispatch Bldg., Richmond, Va. (Other contracts lately noted.)

Tex., Galveston.—R. S. Gitovich let contract for store and hotel building. (See Stores.)

Va., Norfolk.—Lowenberg Corp. let contract to F. C. Rice, Norfolk, for alterations to Hotel Neddo on Plume St.; brick; Barrett specification roof; install steam heat, plumbing, skylights, etc.; cost \$10,000; Harvey Abrahams, Archt., Arcade Bldg., Norfolk. (Noted in Dec.)

Va., Petersburg.—Levitt Cooper & Murthen let contract to erect store and hotel building. (See Stores.)

MISCELLANEOUS

Fla., Dade City.—Barns.—Sunnybrook Tobacco Co., G. M. Massey, Mgr., let contract to erect 5 tobacco barns; completion by May 1.

Md., Baltimore.—Stable.—E. H. Koester, 64 W. Lexington St., let contract to Adam Kratz, 119 S. Carrollton Ave., Baltimore, to erect stable; part 1 story and part 2 stories; about 73x84 ft.; ordinary construction; slag roof; steam heat; John Freund, Archt., II E. Lexington St. (Lately noted.)

Tex., Ft. Worth.—Stable.—Mrs. E. J. Daggett let contract to E. S. Newcomb, Ft. Worth, to erect 1-story reinforced concrete livery stable to cost \$4000, and 2-story reinforced concrete warehouse at 7104-6 S. Houston St., to cost \$13,902.

February 3, 1916.]

MANUFACTURERS RECORD.

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Bathhouse Co., J. E. Pearce, Prest., let contract to W. H. Zemper, Galveston, to erect bathhouse; accommodations for 1000 bathers; 250x70 ft.; cost \$30,000. (Lately noted.)

Tex., Galveston—Bathhouse, etc.—Joy Palace Amusement Co. (G. K. Jorgensen and others) let contract at \$35,000 to Gilsonite Construction Co., Dallas, Tex., and St. Louis, to erect first unit of bathhouse, theater and amusement building; 220x243 ft.; reinforced concrete and tile; concrete roof and floors; heating undecided; total cost \$15,000; I. A. Walker, Archt., Galveston. (Lately noted to have let contract for foundation.)

Va., Hopewell—Restaurant.—Mr. Hourakis let contract to Singery Construction Co., Hopewell, to erect restaurant; 25x55 ft.; 2 stories.

RAILWAY STATIONS, SHEDS, ETC.

Mo., St. Louis.—Terminal R. R. Assn. let contract to Fruin-Colon Contracting Co., St. Louis, to erect commissary at Rankin and Scott Aves.; 40x90 ft.; fireproof; concrete and composition roofing; steam heat; electric lighting; electric elevators; E. M. Tucker, Archt., Railway Exchange Bldg., St. Louis. Address contractor. (Noted in Jan.)

SCHOOLS

Tenn., Cookeville.—State Board of Education let contract to Fulcher Brick Co., 165 1/2 Ave. N., Nashville, to erect 2 brick dormitories and remodel administration building for Polytechnic Institute; dormitories 62x90.2 ft.; brick; stone trim; slate roof; cost \$61,671; Asmus & Norton, Archts., Nashville. (Noted in January.)

Tenn., Nashville.—Ward-Belmont School let contract to Fostor & Creighton Co., Nashville, to erect dormitory addition; 3 stories; fireproof; 100 rooms; slate roof; cost \$60,000; John Kevan Peebles, Archt., Norfolk, Va. (Lately noted.)

Tex., Alta Vista.—School Board, Waco, Tex., let contract to M. M. Bushnell, Waco, to erect school; Edw. H. Reed, Archt., Waco. (Lately noted.)

Tex., Cleveland.—School Board, G. O. Bartle, Prest., let contract to Murphy & Croft, Mineral Wells, Tex., to erect brick and concrete school; 64x96 ft.; semi-fireproof; Barrett specification and metal tile roof; jacked stoves; electric light; cost \$31,500; Lane & Dowdy, Archts., Houston, Tex.

Tex., College Station.—W. C. Hedrick Construction Co., Dallas, general contractor at \$57,500 to erect hospital for Agricultural and Mechanical College, let sub-contracts to following: Buell Planing Mill Co., K. D. Herget, Mosher Mfg. Co., all of Dallas; Elgin-Butler Brick Co., Austin; Palmer Brick Co., Palmer, Tex.; San Marcos Gravel Co., San Marcos, Tex.; Fraser Brick Co., Trinity Portland Cement Co., Green & Wortham, Dallas Heating & Ventilating Co., all of Dallas. (Lately noted.)

Tex., Denton.—Gilsonite Construction Co., Dallas, general contractor to erect 2 wings to academic arts building for College of Industrial Arts, let following subcontracts: Hollow tile, Texas Fuel & Supply Co.; cement, Trinity Portland Cement Co.; sheet-metal work, Dallas Heating & Ventilating Co.; roofing, Dallas Roofing & Insulating Co.; plastering, G. E. Moore & Co.; painting, Green & Wortham; all of Dallas; reinforcing steel, Texas Rolling Mill Co., Fort Worth; faced brick, Acme Brick Co., Denton; common brick, Diamond Press Brick Co., Ferris, Tex.; ornamental and miscellaneous iron, Christopher & Simpson Iron Works, St. Louis; mill work, Enochs Lumber & Mfg. Co., Jackson, Miss.; glass and glazing, R. H. Turner, Dallas representative of Conde-Bray Glass & Paint Co., St. Louis; plans by Endress & Watkins, Austin and Houston, call for 4-story buildings; cost \$78,000. (Noted in Oct.)

Tex., Houston.—Wm. M. Rice Institute let contract to Horton & Horton, Houston, to erect south wing to residential group No. 2; 20x35 ft.; cost \$100,000; brick, stone and reinforced concrete; glazed tile and copper roof; Cram & Ferguson, Archts., Boston and Houston; W. Ward Watkin, representative, Houston. (Lately noted.)

Tex., Tokio, R. D. 2, West.—School Board, Waco, Tex., let contract to M. M. Bushnell, Waco, to erect school in Tokio School Dist.; Edw. H. Reed, Archt., Waco. (Lately noted.)

STORES

D. C., Washington.—Geo. Claggett let contract to Thos. A. Jameson, 36 Rhode Island Ave. N. W.; to erect store and dwelling at 517 C St. N. E.; cost \$5000.

Fla., Tampa.—Bank of Commerce let contract to erect store and office building. (See Bank and Office.)

Ga., Tifton.—Rickerson Grocery Co. let contract to W. H. Spooner, Tifton, to erect store building; 2 stories; 50x100 ft.; mill construction; probably gravel roof; small hand-power elevator; cost \$10,000; foundation completed; C. W. Fulwood, Jr., Archt., Moultrie, Ga. Address contractor. (Lately noted.)

Ky., Lexington.—A. B. Jones let contract to erect store and lodge building. (See Association and Fraternal.)

Ky., Louisville.—Second Street Amusement Co. let contracts to erect theater, store and office building. (See Theaters.)

N. C., High Point.—H. S. Kress & Co., New York, let contract to W. P. Rose, Goldsboro, N. C., to erect store building; 1½ stories; 50x200 ft.; cost \$25,000; Seymour Barwell, Archt.; let contract Comstock Electric Co., High Point, for electrical work.

N. C., Warsaw.—H. F. Pierce let contract to Z. F. Taylor, Goldsboro, N. C., to erect three store buildings; one 28x90 ft.; two 25x90 ft.; brick; concrete floors; metal ceilings; tin roof; cost \$8000 to \$8500; O. G. Gulley, Archt., Mt. Olive, N. C. (Lately noted.)

N. C., Wilson.—Barnes-Harrell Co. let contract to erect six 2-story brick buildings; lower floor for stores; upper floor, apartments. (Lately noted.)

Okla., Henryetta.—J. R. Reynolds has plans by and awarded contract to B. A. Jackson, Henryetta, to erect 2-story brick business building; 50x100 ft.; mill construction; paper and gravel roof; cost \$10,000; heating plant, \$1100; electric light; lately noted. (See Machinery Wanted—Plate Glass; Metal Bars; Roofing.)

Tex., Galveston.—Robt. I. Cohen and Frank Becker let contract to Eubank & Dilbeck, Galveston, to erect store building on Post-office St.; 40x120 ft.; 2 stories; ordinary construction; built-up composition roof; cost \$16,000; C. D. Hill & Co., Archts., Galveston. (Lately noted.)

Tex., Galveston.—R. Sgivitch let contract to Max Roitzl, Galveston, to erect store and hotel building at 25th and Mechanic Sts.; 75x120 ft.; ordinary construction; composition roof; cost \$20,000; C. D. Hill & Co., Archts., Galveston. (Lately noted.)

Tex., El Paso.—Frank Ainsa let contract to Jolly & Morris, El Paso, to erect store building on Mesa Ave.; 32x80 ft.; 1 story; brick; cost \$3100. (Noted in Jan.)

Va., Hopewell.—Gans-Rady Co. let contract to Singery Construction Co., Hopewell, to erect brick store building on Poyneth St.

Va., Hopewell.—Jong Levens, New York, let contract to Singery Construction Co., Hopewell, to erect building; 2 stories; 24x55 ft.

Va., Petersburg.—Levitt Cooper & Murchison let contract to R. K. Stewart & Son, S. Boston, Va., to erect store and hotel at E. Bank and 2d Sts.; 50x55 ft.; mill construction; slag or felt roof; steam heat; electric lighting; cost \$12,000; S. David Craig, Archt., Petersburg; subcontracts let.

THEATERS

Ky., Louisville.—Second Street Amusement Co. let contract to Lichtenfeld, Metzner & Co., 981-85 Logan St., Louisville, to erect moving-picture theater, store and office building at 2d and A Sts.; 70x120 ft.; tin and composition roof; steam heat; electric lighting; cost \$15,000; subcontracts as follows: Concrete, J. U. Schickl & Bros.; brickwork, C. Fred Koch; plaster, Young & Carnahan; painting, Ben H. Paslick; glass and glazing, Wolf Blitz; steel and iron, Sneed Architectural Iron Works; sheet metal and roofing, J. F. Wagner's Sons Co.; cut stone, John Diebold & Sons Co.; all of Louisville, Ky. (Lately noted.)

Tex., Galveston.—Joy Palace Amusement Co. let contract to erect theater, etc. (See Miscellaneous Structures.)

WAREHOUSES

Ala., Gadsden.—Southern Mfg. Co., H. L. Gwin, Secy. and Treas., will erect brick warehouse; 150x150 ft.; mill construction; brick wall; concrete floor; 3-ply Regal roof; cost \$6000; day labor; material purchased; C. B. Smith, Archt., Gadsden. (Lately noted.)

Ga., Eatonton.—E. B. Ezell has plans by and let contract to J. W. McMillan, Milledgeville, Ga., to erect 2 warehouses; one 70x150 ft.; one 60x100 ft.; one fireproof; one mill construction; metal roof; cost \$15,000; subcontractor, Spivey Lumber Co., Eatonton; will install automatic sprinklers.

Tex., Waco, R. D. 2, West.—School Board, Waco, Tex., let contract to M. M. Bushnell, Waco, to erect school in Tokio School Dist.; Edw. H. Reed, Archt., Waco. (Lately noted.)

STORES

D. C., Washington.—Geo. Claggett let contract to Thos. A. Jameson, 36 Rhode Island Ave. N. W.; to erect store and dwelling at 517 C St. N. E.; cost \$5000.

Fla., Tampa.—Bank of Commerce let contract to erect store and office building. (See Bank and Office.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

MANUFACTURERS RECORD.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

“WANTS”

AIR COMPRESSOR.—Galway & Co., Contr., 38 Longfellow Ave., Jamaica, Long Island, N. Y.—New or second-hand portable air compressor; 125 to 150 cu. ft. per minute.

BAGGING.—Imperial Bagging Co., Norfolk, Va.—Gunny and burlap bagging.

BAKERY EQUIPMENT.—Sanitary Baking Co., Clarksburg, W. Va.—Will open bids about May 1 on complete bakery equipment; for bread and pastry; estimated cost about \$16,000.

BARREL HOOP MACHINERY.—Louis Royer, 26 Algonquin Hotel, Norfolk, Va.—Machine to manufacture truck barrel hoops.

BASEBURNER.—H. D. Fletcher, Beaumont, Tex.—To correspond with stove manufacturers offering plain small side 10 to 14-in. firepot baseburner; send catalogue and prices.

BLACKBOARDS.—E. H. Reed, Waco, Tex.—Prices on blackboards for school building at Ross, Tex.

Boiler.—John G. Duncan Co., 306 W. Jackson Ave., Knoxville, Tenn.—Horizontal return tubular boiler, 100 or 125 or 150 H. P.; A-1 condition; quick shipment; lowest dealer's cash price; high pressure preferred.

Boiler (Marine), etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Feb. 24 to furnish Scotch marine boiler, steel shapes, plates and bars, steel billets, cold-rolled steel, the steel, steel wire, steel or iron chain, steel picket fences, galvanized wire netting, bronze wire screening, sheet brass, copper rivets and burrs, brass rivets, telephone receptacles, onlocks, life preservers, marine lights, water coolers, ice tongs, electric griddle plates, spoons, vinegar bottles, drinking glasses, and towels; blanks and general information relating to this circular (No. 1012) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

BOLTS, etc.—W. A. Pepper, 918 S. Main St., Tulsa, Okla.—3-16x4½ in. galvanized bolts and 1-16x¾ and 1-16x¾ galvanized-iron band.

BRIDGE CONSTRUCTION.—Morgan County, Berkeley Springs, W. Va.—Bids on construction 2-span reinforced concrete arched bridge across Sleepy Creek; each span 55 ft. long, with 14-ft. roadway; plans, specifications, etc., upon application to State Road Bureau, R. P. Davis, Bridge Engr., Morgantown, W. Va.

BRIDGE CONSTRUCTION.—Summers County, Hinton, W. Va.—Bids until Feb. 12 to construct 400-ft. bridge across Greenbrier River; steel bridge of 3 spans or reinforced concrete arch structure; for plans, specifications, etc., address State Road Bureau, R. P. Davis, Bridge Engr., Morgantown, W. Va.

BRIDGE CONSTRUCTION.—Bayou De View Drainage Dist., No. 1 of Cross, Jackson and Woodruff counties, McCrory, Ark.—Bids until Feb. 15 to construct drainage system; 1 main ditch and 6 laterals; remove 2,000,000 yds. earth; work offered in separate contracts or as a whole; certified checks for \$100, \$200, \$300, \$1000 and \$2000; plans, specifications, etc., on file at offices of Clerk of Cross Circuit Court at Wynne; Newsom Engineering Co., Engr., at Wynne; R. J. Kibler at Hickory Ridge; F. W. Beede at Beeville; Bank of McCrory at McCrory, and Burr, Stewart & Burr at Paragould, Ark.

CRUSHING MACHINERY.—Wm. H. Rogers, Houston, Tex.—Machinery to crush and grind, in dry form only, materials to include ochre, umber, chalk, barytes, asbestos and graphite; second-hand equipment may answer purpose.

DESKS.—E. H. Reed, Waco, Tex.—Prices on desks for school building at Ross, Tex.

DISTILLING MACHINERY.—Lloyd D. Grondy, 1409 Hampton Ave., Columbia, S. C.—Data and prices on machinery to extract naval stores (by destructive, steam and solvent processes) from lightwood.

DRUMLINE CONSTRUCTION.—Bayou De View Drainage Dist., No. 1, McCrory, Ark.—Bids Feb. 15 on canal excavation, Cross, Jackson and Woodruff counties; main ditch about 16 mi. long, 60 to 70 ft. bottom, average depth 10 ft.; 4-mi. lateral, 4 and 6-ft. bottom; 12-mi. lateral, 6 and 12-ft. bottom; 3 mi. small laterals, 4 and 6-ft. bottoms; dredge on main ditch and most of largest lateral; other laterals, teams, etc.; contractor to furnish machinery; drain 46,730 acres; R. J. Kibler, Commr., Hickory Ridge, Ark.

DRAINAGE.—Bayou De View Drainage Dist. No. 1, McCrory, Ark.—Bids Feb. 15 on canal excavation, Cross, Jackson and Woodruff counties; main ditch about 16 mi. long, 60 to 70 ft. bottom, average depth 10 ft.; 4-mi. lateral, 4 and 6-ft. bottom; 12-mi. lateral, 6 and 12-ft. bottom; 3 mi. small laterals, 4 and 6-ft. bottoms; dredge on main ditch and most of largest lateral; other laterals, teams, etc.; contractor to furnish machinery; drain 46,730 acres; R. J. Kibler, Commr., Hickory Ridge, Ark.

BUILDING MATERIAL.—Capt. W. H. Whittington, Ardmore, Okla.—Prices and sample of cherry red face brick, floor tile, plaster, metal ceiling, plumbing fixtures and heating plant for \$30,000 hotel.

BUILDING MATERIAL.—C. S. Curtis, Paris, Tex.—Prices and samples of clay tile Spanish roofing, composition shingle roof, floor and promenade tile, face brick, etc.

BUILDING MATERIAL.—J. H. Poulter, Ardmore, Okla.—Prices on face brick, plumbing fixtures, composition roof; for \$25,000 apartment-house.

BUILDING MATERIAL.—See Steel Beams, etc.—Jason E. Lyon.

BUTTER MACHINERY.—E. B. Crabbill, Galax, Va.—To correspond with manufacturers of butter renovating machinery; may buy equipment for 100,000 lbs. annual capacity.

CABLE (ELECTRICAL).—Park Comms., Wm. S. Manning, Gen. Supt., Drury Hill

City of Oxford, Miss., G. A. Shafer, Supt., Light and Water Plant.—To open bids Feb. 1 on 150 K. W., 3-phase, 90-cycle, 240-volt generator and switchboard, direct connected to ample size uniflow engine; all of latest improved type.

ELECTRICAL EQUIPMENT.—City of Oxford, Miss., G. A. Shafer, Supt., Light and Water Plant.—To open bids Feb. 1 on 150 K. W., 3-phase, 90-cycle, 240-volt generator and switchboard, direct connected to ample size uniflow engine; all of latest improved type.

ELECTRICAL EQUIPMENT.—Monson Mfg. Co., Yale, Va.—Prices on second-hand and new electric generator; 1½ K. W., 23 16 C. P. dynamo and rheostat; 250 ft. insulated wire; complete switchboard; 20 16 C. P. lamps and 2 32 C. P. lamps; storage battery

etc.

to furnish light when dynamos still for one hour; complete lighting plant; quote on all and each item separate.

Electrical Machinery.—See Foundry Equipment, etc.—Sanitary Mfg. Co.

Electrical Machinery.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Feb. 15 for delivering generator set at Naval Academy, Annapolis. Apply for proposals to navy pay office, Baltimore, or to Bureau.

Electrical Machinery.—Atlantic Engineering Co., 606-607 Germania Bank Bldg., Savannah, Ga.—Prices on one 35 to 50 K. W., 60-cycle, 3-phase, 2300-volt, second-hand alternating current generator, direct connected to either vertical or horizontal automatic steam engine; for use at 100 to 125 lbs. steam pressure; first-class operative condition; give full information as to manufacturer, location, age, etc.; best price complete with belted exciter.

Electrical Supplies.—Porter Electric Incubator Co., Kennett, Mo.—Catalogues and prices on electrical supplies of all kinds.

Elevators.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C.—Bids until Feb. 29 for installation of electric passenger elevator in U. S. post-office and courthouse; plans and specifications at office of Mr. Wetmore as above and custodian at Martinsburg.

Elevator (Passenger).—Treasury Department, Supervising Archt.'s Office, Washington, D. C.—Bids opened Feb. 29 for installation electric passenger elevator in U. S. post-office and courthouse, Martinsburg, W. Va.; copies of drawings and specifications obtainable.

Engine.—See Electrical Machinery.—Atlantic Engineering Co.

Engine.—Galway & Co., 38 Longfellow Ave., Jamaica, Long Island, N. Y.—35 H. P. engines; gas or oil driven.

Engines (Crude Oil).—See Sterilizers, etc.—Coco Wheatent Co.

Engines (Gas).—See Foundry Equipment, etc.—Sanitary Mfg. Co.

Face Brick.—See Building Material.—J. H. Poulter.

Face Brick.—See Building Material.—C. S. Curtis.

Face Brick.—See Building Material.—Capt. W. H. Whittington.

Fire Engines (Motor).—City of Tarpon Springs, Fla.—Prices on fire automobile engine. Address The Mayor.

Fire Escapes (Stairway, etc.).—Dezell Enterprise Co., Greensboro, Fla.—Prices (for customer) on iron stairway or other fire escape; for residence.

Floor Scraper.—J. H. Poulter, Ardmore, Okla.—Prices on electric floor scraper and sander.

Flooring.—See Marble and Tile Work, etc.—Comms. District of Columbia.

Flour Mill Machinery.—Lone Mountain Milling Co., Lone Mountain, Tenn.—Bids Feb. 15 on machinery for daily capacity 100 barrels flour, 400 bags meal and 100 bags feed.

Flour, Sugar, Rice, etc.—Alexis & Gaganakis, La Canee, Crete.—Interested to receive samples and prices, f. o. b. New York, on following: Flour in bags of 100 lbs.; sugar, 220-lb. bags; rice, 220-lb. bags; cellulose paper; packing paper; also cotton thread, 6-cord, in reels of 200 and 300 yds., and in bundles; view to representation.

Foundry Equipment, etc.—Sanitary Mfg. Co., J. H. Davis, Gen. Mgr., Kenova, W. Va.—To buy foundry equipment, metal-working machinery, woodworking machinery, hydraulic presses and dies, accumulators, heavy duty pumps, gas engines, electric motor and dynamo, etc.

Glass (Plate).—See Steel Beams, etc.—Jason E. Lyon.

Grain Elevator.—Hobble Elevator Co., care H. M. Hobble Grocery Co., Montgomery, Ala.—Correspondence with builders of steel grain elevators, capacity about 50,000 bus.

Hammers.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—156 copper-handled hammers, delivery at Norfolk, schedule No. 9246; also various other hammers, same schedule.

Heaters.—E. H. Reed, Waco, Tex.—Prices on heaters for \$10,000 school building at Ross, Tex.

Heating Plant.—Bothwell & Shaw, Box 332, Tyler, Tex.—Prices on vapor vacuum heating plant for \$6000 hospital.

Heating Plant.—Capt. W. H. Whittington, Ardmore, Okla.—Prices on heating plant for \$30,000 hotel.

Ice-cream Machinery.—B. B. Adams, Jr., Box 125, Milledgeville, Ga.—Prices on machinery to manufacture ice cream and kindred products; for 5000 population.

Ice Plant Equipment.—Crockett Ice, Electric Light & Power Co., C. W. LeGory, Mgr., Crockett, Tex.—Prices and description on machinery for loading ice from cold-storage rooms into railroad cars; for shipment; also prices on boiler-feed pump for 250 H. P. boiler.

Iron Band.—See Bolts, etc.—W. A. Pepper.

Knitting Equipment.—P. E. Isenhower, Conover, N. C.—Data and prices on equipment for knitting men's ribbed underwear.

Lime Equipment.—Brans-Glass Engineering & Development Corp., 327 Slaughter Bldg., Dallas, Tex.—Quotations on all kinds of machinery for manufacturing lime.

Locomotive.—Pennsylvania Equipment Co., Philadelphia, Pa.—Second-hand 55-ton standard gauge switching engine.

Locomotive.—Postoffice Box No. 516, Norfolk, Va.—24-in. gauge 6 to 10-ton locomotive; Koppel type preferred; guaranteed condition and ready for immediate use; state location and submit detailed description.

Lubricants.—See Textile Yarns, etc.—Knuppert & Rosenvinge.

Lumber.—J. M. Stevenson and Benj. Russell, Alexander City, Ala.—Purchased and

Metal Bars.—See Plate Glass.—J. R. Reynolds.

Metal Ceiling.—See Building Material.—Capt. W. H. Whittington.

Metal-working Machinery.—See Foundry Equipment, etc.—Sanitary Mfg. Co.

Metals, etc.—Societe Commerciale & Technique, Kallivocas & Cle., P. O. Box 2, Athens, Greece.—Interested, with view to representation, in following: Metals—copper, tinplate, galvanized and corrugated sheets, bar tin, etc.; chemical products—linseed oil (boiled and double boiled), naphtaline, aspirine, medicinal castor oil, etc.; cotton yarns, sewing threads, haberdashery, shirts, handkerchiefs, collars, hats, hose, and all textiles.

Milling (Meat and Feed) Machinery.—See Flour Mill Machinery.—Lone Mountain Milling Co.

Mining Equipment.—Southern Zinc & Mining Co., Edw. L. Patton, Prest., 155 Broadway, New York.—It is about 30 days to buy air compressor, drills, pumps, wet concentrating machinery, etc.

Motor Car.—Pennsylvania Equipment Co., Philadelphia, Pa.—Second-hand standard gauge steam-propelled car or coach, capable of pulling 2 or 3 additional cars.

Motor Engines.—Franklin & Co., 62 Basinghall St., London, E. C., England.—Offers on cheap motor engines for shipment to Russia.

Piping.—Dixie Oil & Gas Co., 414 Fannin St., Houston, Tex.—Prices on 4, 6 and 8-in. oil well casing.

Piping (Wood).—Thompson Bros. Lumber Co., Trinity, Tex.—Prices on 15,000 ft. 8 or 12-in. wood pipe for water.

Plate Glass.—J. R. Reynolds, Henryetta, Okla.—Prices on plate glass with metal bars for \$10,000 building.

Plumbing.—See Building Material.—Capt. W. H. Whittington.

Plumbing.—State Hospital for Insane, C. Fred Williams, Supt., Columbia, S. C.—Bids until Feb. 10 to install plumbing in Parker Bldg.; plans and specifications obtainable from Geo. E. Lafaye, Archt., Columbia.

Plumbing Fixtures.—See Building Material.—J. H. Poulter.

Pump.—Thompson Bros. Lumber Co., Trinity, Tex.—Prices on electrically-driven pump for 24-hour capacity 500,000 gals. water.

Pumps (Boiler Feed).—See Ice Plant Equipment.—Crockett Ice, Electric Light & Power Co.

Pumps.—See Foundry Equipment, etc.—Sanitary Mfg. Co.

Pumps, etc.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Feb. 15 for delivering night and prismatic binoculars, wall board, steel forgings, monel metal, yellow pine, terra-cotta pipe, hydraulic pump, steel rails, angle splice bars, frogs, etc.; steel, steel rivets and recoil springs, sulphur, telescopes, steel tubes, brass and steel tubing at Navy-yard. Apply for proposals.

Rails.—See Pumps, etc.—Bureau Supplies and Accounts.

Refrigerating System.—Will P. Canaan, 3 Ionia Ave. N. W., Grand Rapids, Mich.—Prices and information on refrigerating system for 24-family apartment building.

Road Construction.—Bell County Commissioners, W. C. Bingham, Clerk, Pineville, Ky.—Bids until Feb. 7 to improve road from Four-Mile bridge to Knox county line, 3 mi.; plans and specifications on file with County Road Engr.; bids may be submitted on one section or whole.

Road Construction.—State Highway Commission, G. P. Coleman, Commr., Richmond, Va.—Bids until Feb. 8 to construct 11 mi. of highway; plans, specifications, etc., on file.

Roof (Composition).—See Building Material.—J. H. Poulter.

Roofing.—J. R. Reynolds, Henryetta, Okla.—Prices on paper and gravel roofing for \$10,000 building.

Roofing.—See Building Material.—C. S. Curtis.

Screws (Fly) Materials.—Dezell Enterprise Co., Greensboro, Fla.—Prices on wire cloth, hinges, locks, pulls, etc., for manufacture of fly screens.

Seawall, etc.—City of West Palm Beach, Fla., A. M. Lopez, City Clerk.—Bids until Feb. 21 to complete contract for construction of seawall, improvements to sanitary sewer system and additional street paving; plans and specifications at office L. T. Lockwood, Pres. of Council, and J. B. McCrary Co., Engr., Third National Bank Bldg., Atlanta, Ga.

Sewer Construction.—See Seawall, etc.—City of West Palm Beach, Fla.

Sewer Materials.—H. S. Sealy, Mayor, New Iberia, La.—Prices on various materials for sewer construction.

Sewage-disposal System.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C.—Bids until Feb. 29 for sewage-disposal system at U. S. post-office and courthouse; plans and specifications at office of Mr. Wetmore as above and custodian at Martinsburg.

Shovel (Steam).—R. K. Papin, 55 Pierce Bldg., St. Louis, Mo.—Steam shovel, either Thew or Vulcan; Little Giant one-yard dipper; mounted on a standard gauge railroad truck; St. Louis delivery.

Steam Heating Plant.—Thos. J. Brooks, Griffin, Ga.—Prices on steam heating plant for \$3000 building; second-hand preferred.

Steel Beams, etc.—Jason E. Lyon, Elkhorn, Va.—Steel I beams, plate glass for store front, shelves, counters, etc.

Steel Sheet Piling.—Dabbs & Wetmore, Meridian, Miss.—To buy 76 pieces 9-in. steel sheet piling, 18 ft. long, and 4 pieces 9-in. standard corner section, 18 ft. long; delivery at Clarksdale, Miss., by Mch. 1.

FOR the benefit of business concerns, engineers, contractors, machinery manufacturers, dealers and others who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

We issue every Business Day in the Year THE DAILY BULLETIN

The construction news as published in the Daily Bulletin is invaluable to all business people who want to keep in daily touch with the organization of business enterprises of all kinds throughout the whole South. Unlimited possibilities for the creation of business, for securing contract work, for the sale of machinery and supplies of all kinds, for bond buyers and others, are to be found through a close following up of the news in the Daily Bulletin.

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The subscription price is \$25.00 a year. Are you a subscriber to it, or an advertiser in it? If not, you are missing an opportunity for profitable business.

will manufacture into lumber large tract virgin long-leaf pine land, known as Dixie timber.

Machine Tools.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until Feb. 15 for delivering grinders, lathes and milling machine at navy aeronautic station, Pensacola, Fla. Apply for proposals to supply officer, aeronautic station, or to Bureau.

Machine Tools.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—Universal saw bench, delivery Newport, R. I., schedule No. 9264; 2 universal grinding machines, delivery Washington, schedule No. 9262; surface planer, delivery Newport, R. I., schedule No. 9264; hydraulic pump, delivery Washington, schedule No. 9253.

Manufactured Products.—Guido Voltoni, Via Caradosso 8, Milan, Italy.—Interested in American manufactures; view to representation; send samples where possible.

Marble and Tile Work, etc.—Comms. District of Columbia, 509 District Bldg., Washington, D. C.—Bids until Feb. 15 to furnish and erect marble water-closet partitions, promenade tile roofing, enamel tile work, window guards, drinking fountains, lavatory, wood block flooring, modification of west fan-room, locker-room and workroom Central High School, 13th and Clifton Sts. N. W.; blank proposal forms, specifications and information from Chief Clerk, Engr. Dept., Room 427, District Bldg., Washington, for \$5.

Painting (Cigarette) Machinery.—Toacco Mill Co., Ltd., F. Reinhardt, Moscow, Russia.—To correspond with manufacturers of cigarette-paper machinery.

Paving Blocks.—G. S. Brown, Engr. Contr., 70 Loewenstein Bldg., Charleston, W. Va.—To correspond with producers of granite and Belgian paving blocks.

Paving.—See Seawall, etc.—City of West Palm Beach, Fla.

Piping.—See Well Drills, etc.—Queen Oil Co.

Pinions.—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—36 cotton or rawhide pinions, schedule No. 9260.

Sterilizers, etc.—Coco Wheatcat Co., C. W. McKesson, Secy., 205½ Franklin St., Waco, Tex.—Prices on sterilizer, 500 lbs. capacity; cooling plant; crude oil engines.

Textiles.—See Metals, etc.—Societe Commerciale & Technique.

Textile Yarns, etc.—Knupert & Rosenblage, Copenhagen, Denmark.—Agencies for cotton, wool, twist and other textile yarns; also for vegetable grease and other products of this nature; shipments to be accompanied by affidavits that they will not be exported to warring countries.

Thread (Cotton).—See Flour, Sugar, Rice, etc.—Alexis & Gaganakis.

Tile.—See Building Material.—C. S. Curtis.

Tire.—See Building Material.—Capt. W. H. Whittington.

Tiling.—See Marble and Tile Work, etc.—Commiss. District of Columbia.

Tobacco.—Tobacco Mill Co., Ltd., F. Reinhardt, Moscow, Russia.—To correspond with American tobacco planters prepared to consider export trade.

Tools.—Wade H. Brown, Jane Lew, W. Va.—Addresses of manufacturers of tools; to include claw bars, wrenches, etc.

Tubing (Metal).—See Pumps, etc.—Bureau Supplies and Accounts.

Tubing (Brass).—Bureau Supplies and Accounts, Navy Dept., Washington, D. C.—150 lbs. brass tubing, schedule No. 9254; also miscellaneous steel tubing, schedule No. 9255.

Vacuum Cleaner.—Bothwell & Shaw, Box 322, Tyler, Tex.—Prices on vacuum cleaner.

Veneer Machinery.—F. W. Lachicotte, Waverly Mills, S. C.—Information on veneer machinery.

Vending Machines.—S. M. McMurray, Ch. Engr., 59 Arcade, Nashville, Tenn.—Data on slot machines.

Veneering Machinery.—Desha Fruit & Truck Growers' Assn., Desha, Ark.—Veneering machinery to manufacture universal strawberry folding crate.

Water-wheel.—D. H. Horner, Hemp, N. C.—Prices on water-wheel for flour mill.

Water-wheels.—B. W. Gabagan, Stackhouse, N. C.—54-in. or next size above or below turbine water-wheel; either right-hand or left-hand; reliable make; good second-hand; also two 20 to 24-in. same as above; all for 10-ft. head of water.

Well Drills, etc.—Queen Oil Co., W. N. Bullard, V.-P., Houston, Tex.—Prices on well supplies, including pipe and rotary drilling outfits.

Well Drilling.—John D. Kelley, City Secy., Galveston, Tex.—Bids until Feb. 10 to drill three 12-in. wells and equip with pumping equipment to deliver into city's receiving tank at Alta Loma 3,000,000 gals. water daily; specification on file with and obtainable from Mr. Kelley.

Wire Ropes.—Easton Machinery Co., Easton, Pa., second-hand wire rope, ½ to 1½-in. Give lengths and prices, Easton.

Winding Machine.—Pasquale Ficchio, P. O. Box 665, Tampa, Fla.—Magnet winding machine, automatic; magnet is to be 3½ in. long; No. 15 D. C. C. wire.

Woodworking Machinery.—See Foundry Equipment, etc.—Sanitary Mfg. Co.

W. A. Chambers and M. L. Cross are interested.

Tex., San Angelo.—Interstate Electric Co. of New York, E. A. Fitkin, Prest., is reported considering establishment of a street railway in San Angelo.

West Virginia Geological Survey, County Reports 1915, Wyoming and McDowell Counties. By Ray V. Hennen, assistant geologist, aided by Robt. M. Gathrop. Published by the Wheeling News Lithographing Co., Wheeling, W. Va. Clothbound. 783 pages. Price \$2.50.

The volume contains a short historical and industrial sketch; one chapter on the physiography; one chapter on the structure; five chapters on the stratigraphy, and three chapters on the mineral resources of Wyoming and McDowell counties. The greater portion of the book is included in Chapter X, on coal, by far the most valuable mineral resources yet discovered on the area. In order to describe the several beds in their proper sequence it was found necessary to make an exhaustive study of the entire rock system and to embody in the text a large number of sections, both general and special, as also the logs of coal test borings, which matter will not interest the layman as much as the engineer, geologist or coal operator interested in the development of the several fields. The district treated of in this report being one of the richest in the State in the production of the smokeless New River and Pocahontas coals, makes the book of especial importance. The volume contains 28 figures and 36 plates. It is accompanied by two maps, the first showing topography and second the general and economical geology. Extra copies of geological map are \$1 each; topographic, 50 cents.

OKLAHOMA.—Eufaula.—Oklahoma State Bank of Eufaula, capital \$25,000, has applied for charter. E. N. Rhodes is Prest. and N. H. Jencette of Mullins, S. C., is Cashr.

N. C., Winston-Salem.—The Insurance Service Co. of Winston-Salem, a new concern, is Incptd.; capital, authorized, \$49,000; paid in, \$23,000. Will begin business Feb. 1. Jas. O. Cobb is Prest.; W. G. Jerome, V.-P.; W. Ray Johnson, Secy. and Treas., and W. Carey Brown, Asst. Secy. and Auditor.

Okla., Eufaula.—Oklahoma State Bank of Eufaula, capital \$25,000, is chartered; incorporators, M. E. Turner, V. A. Pipkins, R. B. Buford, C. H. Tully, G. J. Fuller and H. B. Ernest, all of Eufaula.

Okla., Tulsa.—J. E. Crossle, Prest. Central National Bank, and associates are also reorganized organizing a trust company.

S. C., Bamberg.—Citizens' Building and Loan Assn., a new concern, is chartered; capital \$60,000. A. W. Knight is Prest.; G. F. Hair V.-P.; W. A. Klauber, A. M. Denbow and J. D. Copeland, Jr., directors.

S. C., Brunson.—First National Bank of Brunson has applied for charter; capital \$25,000.

S. C., Ninety-Six.—First National Bank of Ninety-Six has applied for charter; capital \$50,000.

S. C., York.—T. H. White of Chester, S. C., and others are reported contemplating establishment of a bank at York.

Tenn., Shelbyville.—Farmers' Loan & Trust Co., capital \$10,000, is organized; directors, W. E. Gant, Prest.; John M. Tunn, V.-P.; Clarence Snell, Secy. and Treas.; B. D. Kinney and Amos Gammill.

Tenn., Trezevant.—Farmers and Merchants' Bank, capital \$10,000, is reported organized and has applied for charter to succeed the Bank of Trezevant, of which R. T. Argo is Prest. and H. C. Smith Cashr.

Tex., Bloomburg.—Bloomburg State Bank is authorized to do business; capital \$10,000. V. D. Glass is Prest. and A. L. Knowles Cashr. Successor to the Farmers and Merchants' Bank of Bloomburg.

Tex., Orange Grove.—State Bank of Orange Grove, capital \$10,000, is authorized to begin business. Philip Welhausen is Prest. and J. A. Carvel Cashr.

Tex., Waco.—National Medical Service Insurance Co., a mutual concern, is chartered; directors, W. H. Hoffman, J. W. Bass, Dr. G. B. Foscue, John Maxwell, W. V. Crawford, R. W. Seawall and G. C. Waldrop.

Tex., Wellington.—City State Bank, capital \$50,000, is authorized to do business. Jas. C. Doneghey is Prest. and Harvey V. Creath Cashr. Successor to the City National Bank of Wellington.

Tex., Wharton.—The Wharton National Bank, a reorganization, is chartered with \$30,000 capital and \$3000 surplus, and has begun business. A. A. Mullen is Prest.; Thos. Brooks and E. Hawes, Sr., V.-P.s, and B. J. Wright Cashr.

Va., Dinwiddie.—Planters' Bank of Dinwiddie is chartered; capital \$10,000 to \$50,000. J. R. Beck of Butterworth, Va., is Prest. and H. H. Galusha of Dinwiddie is Secy. and Cashr.

Va., Kenbridge.—First National Bank of Kenbridge has applied for charter; capital \$50,000.

Va., Reedville.—Commonwealth National Bank of Reedville, capital \$25,000, surplus \$2500, is organized to begin business about Mch. 1; directors, H. Gordon Blundon, Prest.; Luther B. Rice, V.-P.; Clifford L. Bussells, Cashr.; Warren J. Courtney, Jas. E. Marsh, W. H. Blackwell and C. L. Gastkins.

Va., Richmond.—Church Hill Bank, Inc., of Richmond is authorized to open a branch in Fulton, a suburb. Oscar E. Parrish is Prest. and Cashr.

Va., Richmond.—Richmond Savings and Loan Assn. is organized; Julian W. Tyler, Prest.; Irvin R. Sutherland, V.-P.; Geo. S. Barnard, Secy. Treas.

Mr. J. Frank Lawrence, W. D. Langston and others.

N. C., Hamlet.—The Page Trust Co. of Aberdeen, N. C., according to a local report, will open a branch at Hamlet. H. A. Page is Prest.; J. A. McKeithan V.-P., and J. W. Graham Cashr., all at Aberdeen.

N. C., Hamlet.—First National Bank of Hamlet, capital \$25,000, has applied for charter. E. N. Rhodes is Prest. and N. H. Jencette of Mullins, S. C., is Cashr.

N. C., Winston-Salem.—The Insurance Service Co. of Winston-Salem, a new concern, is Incptd.; capital, authorized, \$49,000; paid in, \$23,000. Will begin business Feb. 1. Jas. O. Cobb is Prest.; W. G. Jerome, V.-P.; W. Ray Johnson, Secy. and Treas., and W. Carey Brown, Asst. Secy. and Auditor.

Okla., Eufaula.—Oklahoma State Bank of Eufaula, capital \$25,000, is chartered; incorporators, M. E. Turner, V. A. Pipkins, R. B. Buford, C. H. Tully, G. J. Fuller and H. B. Ernest, all of Eufaula.

Okla., Tulsa.—J. E. Crossle, Prest. Central National Bank, and associates are also reorganized organizing a trust company.

S. C., Bamberg.—Citizens' Building and Loan Assn., a new concern, is chartered; capital \$60,000. A. W. Knight is Prest.; G. F. Hair V.-P.; W. A. Klauber, A. M. Denbow and J. D. Copeland, Jr., directors.

S. C., Brunson.—First National Bank of Brunson has applied for charter; capital \$25,000.

S. C., Ninety-Six.—First National Bank of Ninety-Six has applied for charter; capital \$50,000.

S. C., York.—T. H. White of Chester, S. C., and others are reported contemplating establishment of a bank at York.

Tenn., Shelbyville.—Farmers' Loan & Trust Co., capital \$10,000, is organized; directors, W. E. Gant, Prest.; John M. Tunn, V.-P.; Clarence Snell, Secy. and Treas.; B. D. Kinney and Amos Gammill.

Tenn., Trezevant.—Farmers and Merchants' Bank, capital \$10,000, is reported organized and has applied for charter to succeed the Bank of Trezevant, of which R. T. Argo is Prest. and H. C. Smith Cashr.

Tex., Bloomburg.—Bloomburg State Bank is authorized to do business; capital \$10,000. V. D. Glass is Prest. and A. L. Knowles Cashr. Successor to the Farmers and Merchants' Bank of Bloomburg.

Tex., Orange Grove.—State Bank of Orange Grove, capital \$10,000, is authorized to begin business. Philip Welhausen is Prest. and J. A. Carvel Cashr.

Tex., Waco.—National Medical Service Insurance Co., a mutual concern, is chartered; directors, W. H. Hoffman, J. W. Bass, Dr. G. B. Foscue, John Maxwell, W. V. Crawford, R. W. Seawall and G. C. Waldrop.

Tex., Wellington.—City State Bank, capital \$50,000, is authorized to do business. Jas. C. Doneghey is Prest. and Harvey V. Creath Cashr. Successor to the City National Bank of Wellington.

Tex., Wharton.—The Wharton National Bank, a reorganization, is chartered with \$30,000 capital and \$3000 surplus, and has begun business. A. A. Mullen is Prest.; Thos. Brooks and E. Hawes, Sr., V.-P.s, and B. J. Wright Cashr.

Va., Dinwiddie.—Planters' Bank of Dinwiddie is chartered; capital \$10,000 to \$50,000. J. R. Beck of Butterworth, Va., is Prest. and H. H. Galusha of Dinwiddie is Secy. and Cashr.

Va., Kenbridge.—First National Bank of Kenbridge has applied for charter; capital \$50,000.

Va., Reedville.—Commonwealth National Bank of Reedville, capital \$25,000, surplus \$2500, is organized to begin business about Mch. 1; directors, H. Gordon Blundon, Prest.; Luther B. Rice, V.-P.; Clifford L. Bussells, Cashr.; Warren J. Courtney, Jas. E. Marsh, W. H. Blackwell and C. L. Gastkins.

Va., Richmond.—Church Hill Bank, Inc., of Richmond is authorized to open a branch in Fulton, a suburb. Oscar E. Parrish is Prest. and Cashr.

Va., Richmond.—Richmond Savings and Loan Assn. is organized; Julian W. Tyler, Prest.; Irvin R. Sutherland, V.-P.; Geo. S. Barnard, Secy. Treas.

NEW SECURITIES

Ala., Anniston.—\$25,000 of 5 per cent. 30-year, \$500 denomination, school bonds have been sold to J. C. Mayer & Co. of Cincinnati, O., at 100.25. These bonds were previously awarded to another purchaser, but the deal was not closed.

RAILROAD CONSTRUCTION

RAILWAYS

Baker and A. M. Cook to take over and lay track upon and equip the line, for which grade and trestles are completed from Andrews to Hayesville, N. C., 25 mi., via Marbles and Peachtree. This denies a recent report.

Oklahoma, Edmond.—Grading has begun for the extension of the Oklahoma Ry. from Edmond to Guthrie, Okla., 16 mi. G. B. Treat, 211 Terminal Bldg., Oklahoma City, is Ch. Engr.

Tex., Bowie.—A subscription of \$3000 to stock of the Dallas Northwestern Traction Co. for survey from Bowie to Krum, Tex., was made at a mass-meeting. E. P. Turner of Dallas, Tex., is Prest. of the company.

Tex., Midland.—Grading will begin Mch. 1 with local forces on the Midland & Northwestern Ry., to be 65 mi. long from Midland to Seminole, Tex. Country level. T. J. O'Donnell of Sweetwater, Tex., is Prest. and Gen. Mgr.; H. N. Garrett, V.-P.; B. C. Girdley, Secy. and Treas., and G. W. Thaxter, Ch. Engr.

Tex., Orange.—Survey is reported complete for the proposed extension of the Gulf, Sabine & Red River R. R. in Louisiana, about 35 mi. Lutcher & Moore Lumber Co. of Orange is interested.

Tex., San Antonio.—Construction of the proposed Houston & San Antonio Interurban Electric Ry. is to begin Feb. 20 between San Antonio and Seguin, Tex., according to local announcement. Ed Kennedy, Houston, Tex., is Prest.

Va., Petersburg.—Petersburg & Appomattox Electric Ry., from Petersburg to Hopewell, Va., 10½ mi., is completed and cars have been operated. Regular schedule to be established within 2 weeks. T. M. Wortham, Richmond, Va., is Prest.

Va., Honaker.—The Norfolk & Western Ry. Co. at this time has no plan in view to build a line from near Honaker through Buchanan county, Va., and Pike county, Ky., to the Elkhorn coal field. This refers to a late press report.

STREET RAILWAYS

Md., Baltimore.—Idlewyde Realty Co. has completed about two-thirds of its 1-mi. electric railway from the York Rd. near Govans to Idlewyde and expects to operate by Mch. 1. Claiborne, Johnston & Co. of Baltimore are the contractors.

Tenn., Clarksville.—Citizens' Street Railway Co. is organized to obtain charter and take over and reconstruct Clarksville & Dunbar Cave Ry. About \$3500 will be expended. John J. Conroy, W. E. Beach, C. W. Bailey,

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Ala., Camden.—Steiner Bros. of Birmingham have bought \$22,000 of 6 per cent. 10-year water, sewer and street bonds which were voted Dec. 6 and dated Jan. 1; denominations \$500 and \$250. E. W. Berry is Mayor.

Ark., Marshall.—\$20,000 of 6 per cent. Seacry county road bonds of Improvement Dist. No. 1 have been sold to the Gunter & Sawyer Co. of Little Rock.

Ark., Covington.—An election on \$60,000 of water-works bonds is to be held in the near future. Paul J. Lacier is Mayor.

La., Gueydan.—Election is to be held Feb. 29 to vote on \$250,000 bonds Gueydan Drainage Dist. Address Board of Commrs.

La., Mansfield.—Reported that an election on \$50,000 of high-school bonds will soon be called. Address The Mayor.

Ark., Texarkana.—\$8000 bonds for erection of school in Wooten Springs are voted. Address Board of Education.

Fla., Stuart.—\$33,000 bonds Special Tax School Dist. No. 2, Palm Beach county, are voted and will be placed on the market in near future. H. W. Lewis is Supt. Board Public Instruction Palm Beach County.

Fla., Tallahassee.—\$4000 of paving bonds have been sold to George W. Saxon at par and accrued interest.

Ga., Acworth.—Election is to be held Feb. 15 to vote on \$500 5 per cent. water-works and electric-light-improvement bonds, maturing \$500 annually Dec. 31, 1917, until paid. P. O. McLain is City Clerk.

Ga., Americus.—Election to vote on \$30,000 street-improvement bonds will be held March 15. Address The Mayor.

Ga., Eatonton.—Election will probably be called to vote on \$30,000 school-building bonds. Address The Mayor.

Ga., Folkston.—Bonds for electric-light plant and street improvements are to be issued. B. F. Scott, Prest. Chamber of Commerce may be able to give information.

Ga., Newman.—March 2 election is to be held to vote on \$50,000 school bonds. Address The Mayor.

Ga., Tifton.—Election to vote on \$30,000 high-school bonds will be held about March 7. H. H. Hargrett is Mayor.

Ga., Scotland.—\$5000 5 per cent. 20-year school bonds have been purchased by Robins-Humphrey & Wardlaw Co., Atlanta.

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Ky., Lexington.—Dispatch to Manufacturers Record says \$350,000 4½ per cent. 30-year sewer bonds have been purchased at \$11,451 premium by the Fifth-Third National Bank, Cincinnati.

Ky., Wickliffe.—Ballard county is reported about to sell \$300,000 of road bonds. Address Fiscal Court.

Tex., Covington.—An election on \$60,000 of water-works bonds is to be held in the near future. Paul J. Lacier is Mayor.

Tex., Gueydan.—Election is to be held Feb. 29 to vote on \$250,000 bonds Gueydan Drainage Dist. Address Board of Commrs.

Tex., Mansfield.—Reported that an election on \$50,000 of high-school bonds will soon be called. Address The Mayor.

Tex., Opelousas.—Bids will be received until 6 P. M. Feb. 21 for \$12,000 of 5 per cent. 7½-year average \$500 denomination school bonds of Krotz Springs Dist. No. 7 of St. Landry parish. Address C. J. Thompson, Supt. and Treas. Parish School Board.

Tex., Riverdale.—Application is to be made to the Legislature for authority to issue \$23,000 school bonds. Address Board of Education.

Tex., Salisbury.—Application is to be made to the Legislature for authority to issue \$10,000 fire department bonds. Address The Mayor.

Miss., Laurel.—Bids will be received until March 13 at 2 P. M. for \$25,000 of 5 per cent. 20-year school, street and sewer bonds; denomination \$500. T. G. McCallum is Mayor and D. F. Gardiner City Clerk.

Mo., Aurora.—Reported voted, \$4000 fire-department bonds; defeated \$5000 city hall, \$7000 park, \$18,000 sewer and \$1000 jail.

Mo., Bowling Green.—Feb. 4 election is to be held to vote on \$75,000 courthouse bonds. Address The Mayor.

Mo., Mount Vernon.—An election on about \$15,000 of electric-light bonds is expected. Address The Mayor.

Mo., Ozark.—Election is to be held Feb. 1 to vote on \$40,000 5 per cent. bonds 8 Mi's Special Road Dist., Christian county. Address H. J. Neyer, Secy. Dist.

N. C., Asheville.—Application is to be made to the Board of Commrs., Buncombe county, by Woodfin School Dist., Asheville township, for authority to hold an election to vote on school bonds. W. H. Hippis is County Supt. of Schools.

N. C., Edenton.—\$25,000 of 5 per cent. 30-year school bonds, denomination \$1000, have been sold to the Hanchett Bond Co. of Chicago for \$25,137. E. R. Conger is Mayor and J. R. McMullan Town Clerk.

N. C., Greensboro.—Bids will be received until 2:30 P. M. Feb. 17 by the City Commissioners for \$50,000 of street and \$25,000 of sewer bonds, all 5 per cent. 30-year; denomination \$1000. The rest of the sewer bonds dress T. J. Murphy, Mayor. Further particulars will be found in the advertising columns.

N. C., High Point.—Election March 7 on \$50,000 of 5 per cent. 30-year street bonds; denomination \$1000. Address Arthur Lyon. W. P. Pickett is Mayor.

N. C., Sanford.—Bids will be received at any time for \$20,000 of 6 per cent. school-building bonds. Address E. M. Judd, County Supt. of Education.

N. C., Sanford.—\$20,000 6 per cent. 20-year Sanford graded school district bonds are voted. Ralph Monger, Secy. Board of Education.

Okl., Alva.—The recent election on \$50,000 of school bonds resulted in the defeat of the issue. G. M. Lisk is Clerk Board of Education.

Okl., Bartlesville.—\$24,000 paving bonds have been voted. Address The Mayor.

Okl., Commerce.—\$40,000 of 6 per cent. water-works bonds were sold to C. E. Household of Oklahoma City.

Okl., Locust Grove.—\$18,000 of water-works bonds reported defeated at recent election.

Okl., Ringling.—Election is to be called to vote on bonds for waterworks. Address The Mayor.

S. C., Greenville.—\$75,000 5 per cent. 20-year school district bonds are voted. P. T. Hayne is Chrmn. Board of Trustees.

Tenn., Chattanooga.—\$6447.54 6 per cent. 15-year paving bonds have been purchased at \$133 premium by First National Bank, Chattanooga, O.

Tenn., Knoxville.—April 29 election is to be held to vote on \$50,000 park bonds. John E. McMillan is Mayor.

Tenn., Savannah.—Election is soon to be called in Hardin county to vote on \$150,000

railroad aid bonds. A. A. Watson is County Judge.

Tenn., Savannah.—\$13,000 6 per cent. 4 1/2-year \$500 denomination Hardin county drainage bonds are being offered at private sale. Address A. A. Watson, County Judge.

Tex., Austin.—The Attorney General has approved the following bond issues: \$50,000 of 5 per cent. 10-year, Road Dist. No. 3, Lavaca county; \$35,000 of 5 per cent. 20-year, Road Dist. No. 3, DeWitt county; \$3500 Stephen county School Dist. No. 15; \$3000 Bastrop County School Dist. No. 11; \$1500 Anderson County School Dist. No. 43, and \$1200 Limestone County School Dist. No. 29, all of them 5 per cent. 10-20 year: \$250,000 Dallas sewer 4%: \$125,000 Corsicana school street and sewer bonds, 5 per cent., 40 year: \$6000 Winters water-works, 5 per cent., 10-40: \$40,000 Belton water-works, 5 per cent., 40: \$15,000 San Angelo refunding 4%: \$6000 Taylor County School Dist. No. 54, 5 per cent., 40: \$500, same county, School Dist. No. 30, 5 per cent., 20: \$3000, same county, Dist. No. 11, 5 per cent., 20.

Tex., Bartlett.—\$21,000 5 per cent. 10-40 year street-paving bonds are voted; date for opening bids not yet decided. Stanton Allen is Mayor. Address J. Dodd, City Secy.

Tex., Brackettville.—\$80,000 5 per cent. 10-year Kinney County Brackett Spofford highway bonds have been sold to E. L. Thwing.

Tex., Brownsville.—\$37,885 6 per cent. 110-year warrants for purchase of sewerage plant have been purchased by J. L. Arlitt, Austin, Tex.

Tex., Brownsville.—\$100,000 5 per cent. 10-year Independent School Dist. bonds have been purchased at 101.05 by Kauffman, Smith, Ebert & Co., St. Louis.

Tex., Cold Springs.—\$58,000 San Jacinto county courthouse bonds are voted. Address County Commiss.

Tex., Galveston.—An election is called for March 14 on \$75,000 of municipal improvement bonds. Only taxpayers will vote. Lewis Fisher is Mayor.

Tex., Gilmer.—Bids will be opened at 1 P. M. Feb. 14 for \$75,000 of 5½ per cent. 30-year road-building bonds of Road Dist. No. 7 of Upshur county; denomination \$1000. Address W. H. McClelland, County Judge.

Tex., Jourdanton.—\$30,000 of 6 per cent. semi-annual warrants, maturing serially from 6 to 25 years, and for purchase of water and light plant, have been bought by J. L. Arlitt of Austin, Tex.

Tex., Lamesa.—The \$55,000 of 5 per cent. 30-40 year courthouse and jail bonds of Dawson county, for which bids were received up to Jan. 3, were not sold and date for new bids is not set; denominations \$1000 and \$500. Address Geo. W. Foster, County Judge.

Tex., Lockhart.—Election is to be held in Dist. No. 2, Caldwell county, Feb. 12 to vote on \$10,000 road bonds. J. F. Ellis is County Judge.

Tex., Madisonville.—Election is to be held in Madison county to vote on \$200,000 road bonds. Address County Commiss.

Tex., Marshall.—\$60,000 school bonds are voted. Date for opening bids not yet decided. H. S. Rice is City Secy.

Tex., Port Lavaca.—\$60,000 of road and \$60,000 of drainage 5 per cent. serial bonds of Calhoun county are reported sold to E. A. Toeelman of Galveston at par and accrued interest.

Tex., San Antonio.—\$800,000 5 per cent. 20-40 year San Antonio Independent School Dist. school-building bonds are voted. Walton D. Hood is Pres't, and S. G. Bechtel, Secy. School Board. The Board wires the Manufacturers Record that only sealed bids will be considered.

Va., Hampton.—The City Council has requested the State Legislature for authority to issue not more than \$75,000 of bonds for sewer and other permanent improvements. M. C. Ransome and others are the sewer committee.

Va., Portsmouth.—Board of Supervs. Norfolk county has authorized \$65,000 of school bonds for schools at South Norfolk, Pinhook's Point and Pleasant Grove.

Va., Buckhannon.—\$181,000 of 5 per cent. road bonds of Buckhannon Dist., Upshur county, dated June 1, 1916, are voted. Ernest Phillips is Clerk County Court.

Va., Fairmont.—Election is expected to be held in March on \$500,000 of bonds, of which \$400,000 will be for 2 concrete bridges and \$100,000 for street and sewer extensions. Address The Mayor.

Va., Kingwood.—\$160,000 Kingwood Dist., Preston county, road bonds are voted. E. C. Everly is Clerk County Court.

Va., Madison.—An issue of water-works bonds is reported voted. H. W. B. Mullins is Mayor and S. E. Bradley C. E.

Va., New Martinsville.—Election is called for March 7 in Clay Dist. of Wetzel county on a proposed issue of \$100,000 of 6 per cent. 30-year road bonds. Address County Court.

Va., Ranson.—\$800 of an authorized issue of \$10,000 of municipal building and street-improvement 6 per cent. 10-34 year bonds have been voted and will be offered about March 1; denominations \$100 and \$500.

Va., West Union.—Election is expected about March 1 in West Union, Central and Grant Dist's. of Doddridge county on \$200,000 of road bonds.

FINANCIAL NOTES

The annual convention of the North Carolina Bankers Assn. will be held at Old Point Comfort, Va., on June 14, 15 and 16 next.

Louis H. Tlemann, late of Carleton & Moffat, importers and exporters, New York, has retired from that firm to associate himself with the American Exchange National Bank of that city in the development of the foreign field.

Mackubin, Goodrich & Co., bankers, 110 E. German St., Baltimore, have issued their annual financial review for 1916, which covers the preceding year and contains the high, the low and the last quotations of 1915 for all stocks and bonds traded in upon the Baltimore and the New York exchanges. The high and the low prices for 1914 are also given. Other valuable information is likewise presented in its pages.

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MILL Work Contracts.

The Southern Manufacturing Co., Inc., Gadsden, Ala., during the past 12 years has furnished the mill work, such as sash, doors and frames, for 76 cotton mills in the South. The company furnished 8 mills in 1915, and is now supplying such material for the Sylva Cotton Mills, Shelbyville, Tenn.; for the Elk Mill at Fayetteville, Tenn.; and the Muscogee Mill and the Bibb Manufacturing Co.'s new mill, both at Columbus, Ga.; for a waste mill of the Eva Jane Cotton Mills, Sylvan, Ala.; a waste mill for the Lanett Mills, Fairfax, Ala., near West Point, Ga., and for the State dormitory at Jacksonville, Fla.

Atlanta Company to Utilize Waste for Fuel.

The Gulf No-Fuel Co. has established offices at 617 Third National Bank Bldg., Atlanta, Ga., for the development in that territory of the Oakoal system of utilizing refuse as fuel, controlled by the Co-Coal Co., Kansas City, Mo. The company thinks that its proposition will mean much to the South, as it will be the means of making the cities more sanitary, and at the same time add to their wealth by producing a valuable fuel from the city waste. The plant at Atlanta will employ a large number of men. The system is said to be adaptable to the needs of cities of populations from 10,000 up.

Southern Paving Brick Association's Plans.

The Southern Paving Brick Association, which was organized about a year ago to promote a wider appreciation of the merits of paving brick for road and street construction, has met with much success in its efforts. John W. Sibley, the secretary of the association, who is in active charge of the details of the organization, has appeared before a great many city and county officials in all parts of the South in the interest of the best methods to pursue to obtain modern highways paved with brick. This work has so broadened that the association now finds it necessary to add to its forces a field worker to assist Mr. Sibley, and they are anxious to secure for this work a man of experience and ability in promoting paving brick. The association is conducted entirely along the lines of educative and cooperative work with public officials and others in the interest of paving brick.

Additional Licensees for Dunn Wire-Cut Lug Brick.

The Dunn Wire-Cut Lug Brick Co. of Conneaut, Ohio, has recently added three important companies to its family of licensees. These are the Burton-Townsend Company of Zanesville, Ohio, with two plants and a present daily capacity of 160,000 paving brick; the Trimble Paving Brick Co. of Dayton, Ohio, with one plant at Trimble, Ohio, and another at Gloucester, Ohio, and the Thornton Fire Brick Co., Clarksburg, W. Va., with plant at Thornton, W. Va. In addition, the Deckman-Duty Brick Co. of Cleveland, another Dunn licensee, has consolidated with the Wooster Shale Brick Co. of Wooster, Ohio, under the name of the Medal Paving Brick Co. This adds one more plant to the three which the Deckman-Duty Company owned—one at Cleveland, Ohio; one at Carrollton, Ohio, and one at Malvern, Ohio. These additional companies give the Dunn Company twenty-nine licensees, operating forty-six plants.

Large Contracting Operation.

The Hardaway Contracting Co., Columbus, Ga., contractor for constructing the dam and power-house at Whitney, N. C., on the Yadkin River, for the Aluminum Co. of America, an important part of that company's \$10,000,000 plant to be located there, has now installed on the ground a plant capable of turning out 30,000 yards of masonry per month, and expects to install a second plant of like capacity. The first plant will probably get into operation within the next thirty days, and the second within the next four months. The equipment includes 45 steel derricks with 115-foot masts and 100-foot booms and 20 tons capacity, operated by 40 horse-power hoisting engines; 25 locomotives; 50 flat cars of 100,000 pounds capacity each; 75 12-yard side dump cars and from 5 to 7 steam shovels. About 7000 or 8000 horse-power will be used for purposes of con-

struction, which is purchased from the Southern Power Co., Charlotte, N. C., and transmitted from Albemarle, N. C., over a line installed by the contractor. The contractor is making preparation looking to the completion of the work so that power can be furnished by Dec. 1 of this year.

Refrigeration Installations.

Since its last report of December 21 the York Manufacturing Co., York, Pa., has made 49 installations, a list of the 11 of which in the South follows: Southern Utilities Co., Jacksonville, Fla., one 40-ton vertical single-acting refrigerating machine, direct connected to a cross-compound non-condensing Corliss valve engine, and condensing side, complete, also a 30-ton flooded freezing system and distilling system. This installation was made in the St. Augustine (Fla.) plant of the purchaser, Fayetteville Ice & Manufacturing Co., Fayetteville, N. C., one 4-ton vertical single-acting belt-driven enclosed type refrigerating machine and necessary material for overhauling the existing ice plant. Hetzler Bros., ice and meat packers, Columbia, Mo., one 12-ton vertical single-acting belt-driven enclosed type refrigerating machine and high-pressure side, complete, also a 15-ton shell and tube cooler. Polar Wave Ice & Fuel Co., Manganford Ice House, St. Louis, Mo., one 12-ton vertical single-acting belt-driven enclosed type refrigerating machine and high-pressure side complete, also 1600 feet of 1½-inch direct expansion piping. Gulf Fisheries Co., Galveston, Tex., 2 coils of Shipley flooded atmospheric ammonia condensers and material for remodelling the freezing tank. Palestine Ice, Fuel & Gin Co., Palestine, Tex., 12 coils of Shipley flooded atmospheric ammonia condensers. J. B. Worth Co., Petersburg, Va., 6 coils of atmospheric ammonia condensers. Catawba Ice & Fuel Co., Salisbury, N. C., one 24x32-inch Corliss valve steam cylinder for its 70-ton refrigerating machine. Hamlet Ice Co., Hamlet, N. C., 705 feet of 1½-inch piping for its freezing tank, 25-ton accumulator and 25-ton shell and tube vertical steam condenser.

TRADE LITERATURE

Desk Novelty.

The Carolina Washboard Co., Raleigh, N. C., manufacturers of "Carolina" washboards, is distributing a little novelty in the shape of a wooden memorandum clip for the business man's desk.

Tarpon Springs, Fla.—The Venice of the South.

Many attractive views in and about Tarpon Springs, Fla., are shown in a folder recently issued featuring the scenic beauty of the place, its attractions as a location for year-round and winter homes and the facilities for recreation and sport, probably the chief of the latter of which is that sport which has named the place and made it famous—tarpon fishing. The town is on the Gulf coast, and is the gateway to the Peninsula peninsula.

Safety Set Screw.

The special feature of the Bristo patented safety set screw, explained in a recently-issued leaflet by the manufacturer, the Bristol Company, Waterbury, Conn., is the hollow head with dovetailed projections of the wrench fit. The design prevents the tendency of the wrench to expand or splitting the screw, as it is actually contracted by pressure on the wrench. This screw was awarded the silver medal at the first International Exposition of Safety and Sanitation at New York in 1913. Stock sizes with variously designed heads are listed on the leaflet. Special sizes may be ordered.

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ing one to any with a hankering for the land of year-round climatic mildness.

Standardizing Power Generation.

A paper by W. N. Polakov, New York, Mem. Am. Soc. M. E., presented at the recent meeting of that body in that city, has been published in pamphlet form. The aim of the paper is to outline a method by which the owner of a power plant can, without the necessity of study of technical details of operation, judge how close the actual performance of the plant is to the possible minimum cost at any time or under any circumstances, all variable factors beyond operating control being automatically adjusted. The author believes that scientific research into every phase of power-plant operation should be conducted, to ascertain the standard of efficiency in actual performance, and that the attainment and maintenance of this should be the definite purpose of every superintendent. He holds that such a mode of procedure would be far superior to the method often practised of leaving costing keeping to accountants who know practically nothing of the technique of the business. A thorough outline of the plan mentioned is given.

A County of Diversified Resources.

Davidson county, North Carolina, possesses a wide range of agricultural, industrial and commercial activities for an area of 352,158 acres, only about one-third of which is in cultivation. Farming is its chief asset. Corn is the main crop, but by no means the only one successfully and extensively grown. In the northern end of the county tobacco is raised that commands high prices. Wheat thrives on the fine red soil characteristic of that district. Here are produced upward of 25 or 30 bushels an acre, then a fine crop of grass hay between reaping time and frost. In one instance the wheat production in the county went to 46 bushels to one acre. The adaptability of the land to grass growing is rapidly bringing dairyfarming to the front in Davidson and Davidson to the front in dairy. Thoroughbred herds are replacing inferior cattle in many instances. Various lines of farming are profitably carried on, most promising among those of comparatively recent introduction being clover and alfalfa raising, which go far toward putting cattle and stock farming on a firm footing. The Lexington (N. C.) Dispatch recently said:

"Davidson county is beginning to be known far and wide as an industrial county. People in Cairo, Egypt; within sight of Good Hope, down where the turbulent combination of the Pacific and Atlantic beat around Cape Horn, and in many other remote places of the earth are resting themselves by sitting in Davidson county chairs. Blonde, blonde, brown and black, yellow and red men of earth look into Davidson county mirrors. Thirteen factories are engaged in making household furniture in some form or other, and Davidson is reckoned as one of the leading furniture-making centers of the South. A large number of other plants scattered throughout the county are making lumber into some form of finished product. Eight textile plants in the county turn out a variety of products. Shirts made from Davidson county cloth are worn in South and Central America and as far away as China. Millions of suits of underwear sold throughout all America and many other lands are made from cloth woven in Lexington." These enterprises, however, are by no means the measure of the possibilities of the county's industrial development. The Yadkin River skirts the county for 35 miles of almost continuous shoal, holding the possibility for extensive hydro-electric development. Ample railroad and highway facilities are afforded, and the county is rapidly forming a network of good roads to touch its every part. Good bank and school facilities are to be had. The country is highly healthful and is peopled with a race in whom hospitality is unstinted.

OBITUARY.

William E. Ruggles, recently engineering advisor to the Russian Government and head of the Ruggles-Coles Engineering Co., New York City, died of pneumonia on January 23 at his home at Bergen Point, N. J. About a year ago he answered a call from the Russian Government to go to Petrograd and visit the great wheat-growing provinces, where he designed plans for the storage and handling of wheat that called for the expenditure of over \$100,000,000, it is said. Mr. Ruggles was the inventor of the Ruggles-Coles dryers, manufactured by the company of that name.

Book Reviews.

Satellite Cities. By Graham R. Taylor. Published by D. Appleton & Co., New York and London. Clothbound. 333 pages. Illustrated. Price \$1.50 net.

To direct attention to the process of congestion that has been forcing factories to the outskirts of the city, and particularly to its civic consequences, is the purpose of this book. In it the author endeavors to set forth the opportunity in these outlying districts for applying the technique which is being developed and the idealism which is finding expression in the new science of town planning. For, he thinks, while industrial managers have shown extraordinary foresight, skill and ingenuity in the arrangement of their plants in these areas, no such expert planning has gone into the accompanying community development. No attempt is made to solve the resulting complex problems, but rather an effort to set forth definite facts from typical communities where these problems and the general situation which embodies them are seen in bold outline, such as in Pullman, satellite of Chicago; Granite City, also in Illinois; Gary, Ind.; and Fairfield, the model industrial town lying outside Birmingham, Ala. The history of their foundation, their management, and the reasons for resulting success or failure of such typical cities are given.

The book should be of interest not only to those immediately concerned in civic development, but also to those who are interested in what others are accomplishing in this particular field of endeavor. Most of the material presented in the volume appeared previously as a series of articles in "The Survey."

Scientific Management and Labor. By Robt. Franklin Hoxie, assistant professor of political economy, University of Chicago, and special investigator of scientific management for the United States Commission on Industrial Relations. Published by D. Appleton & Co., New York and London. Clothbound. 314 pages.

Arising from an investigation of scientific management in its relations to labor, made by the author for the United States Commission on Industrial Relations, this book is purported to be a non-partisan exposition of the conditions appertaining thereto, evolved from an avowed effort to discover and set forth the facts and the truth, in the hope of dispelling misconceptions and misunderstandings, that a basis may be found for constructive effort in the interests of all concerned. The book contains in the outset an analysis of the claims of the exponents of scientific management relative to labor, over against which is placed the trades-union objections to scientific management. It treats of the possible benefits of scientific management to labor and to society and gives a full and detailed account of scientific management in practice, concluding the book proper with a discussion of scientific management and labor welfare, and modern industry and craft skill. Then follows a large appendix, which assumes rather the attitude of an argument in answer to claims respecting the matter made by Frederick W. Taylor, H. L. Gantt and Harrington Emerson, and finishes with a schedule of the mode of investigation of a plant.

The investigator and author was assisted by Robt. G. Valentine, industrial counselor, appointed by the commission to represent employing management, and John P. Frey, editor of the International Molders' Journal, similarly appointed to represent labor.

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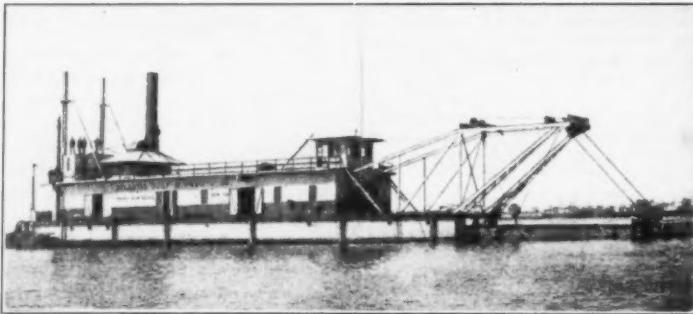
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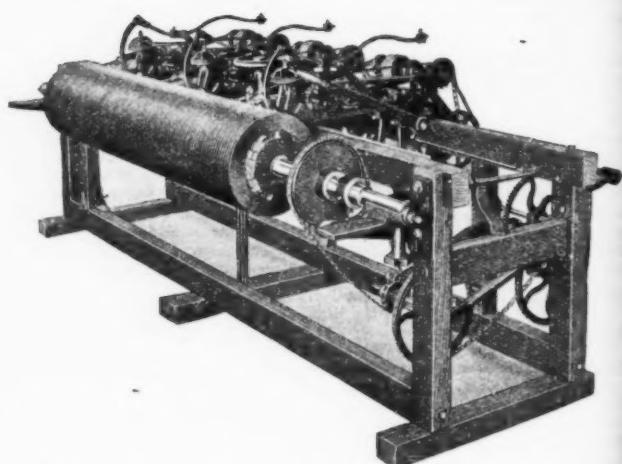
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